Commerc

Better Equipment for Southern Mills

SOUTHERN TEXTILE BULLETIN

VOLUME 26 CHARLOTTE, N. C., THURSDAY, AUGUST 7, 1924 NUMBER 23

Reducing the Cost of Labor

The Possibilities of the Northrop automatic loom in the way of reducing Cost of Labor are not fully appreciated throughout the trade.

Co-operation between our service men and the mills has brought remarkable results in this direction the past two years.

See the special stories in our June and July Cotton Chats.

Let's Talk It Over. We have a story of special pertinance to you and your mill.

DRAPER CORPORATION

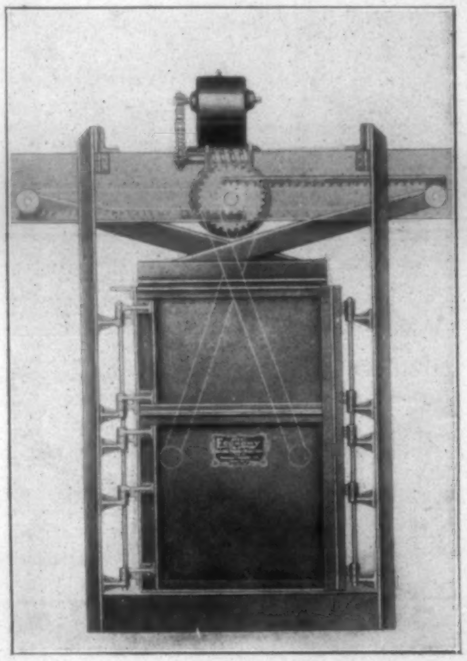
Southern Office Atlanta Georgia **Hopedale Massachusetts**

Copyright 1917 by Draper Corporation

ALL STEEL ECONOMY FIRE PROOF YARN PRESS

Direct Motor Connected——Completely Inclosed Chambers

"JUST WHAT EVERY YARN MILL NEEDS"



This Economy yarn baling press is unquestionably the last word in baling press development.

Chamber completely inclosed—no openings. The chamber is made up of four sets of doors, so that the ends of the chamber open as well as the sides. The four doors, however, lock at two corners by a very simple locking device.

This new yarn press produces a bale 36" long by 24 wide, of 12 to 15 cubic feet, weighing about four hundred pounds and over, making it possible to produce bales 24 to 36 inches deep, weighing from two hundred and fifty to four hundred pounds and over. Chamber five feet deep. Equipped with a directly connected electric motor capable of pulling up to 10 horse torque, alternating current 2 or 3 phase, 50 or 60 cycle, 220 or 550 volt.

The end doors as well as the sides, swing out independently, leaving all four sides of the bale exposed.

We should like very much indeed to confer with you regarding this Economy yarn press, and assure you that you would receive satisfactory service. The users of press are well satisfied with this yarn press, because it is convenient to load with great pressure and rapid in operation. Very substantially constructed.

ECONOMY BALER CO. Dept. S. T. Ann Arbor, Mich.

HA M E T Z CO BOSTON

HA M E T Z CO PHILADELPHIA

HA M E T Z CO PROVIDENCE

A full line of

SULPHUR COLORS

Fast to light and washing

Consolidated Color & Chemical Co.
Central Dyestuff & Chemical Co.
Williamsburg Chemical Co.

HA M E T Z CO CHICAGO

HA M E T Z CO CHARLOTTE

H.A.METZ & CO. Inc.
One-Twenty-Two Hudson Street, New York City.
Boston Philadelphia Providence
Chicago Charlotte San Francisco

HA M E T Z CO SAN FRANCISCO

Hollingsworth on Wheels For Lickerins

My unsurpassed service in rewinding Lickerins has pleased the largest and most exacting mills. You are due yourself an investigation.

Write for Testimonials
Box 69, Greenville, S. C.

WENTWORTH
Double Duty Travelers

Last Longer, Make Stronger Yarn, Run Clear, Preserve the SPINNING RING. The greatest improvement entering the Spinning room since the advent of the HIGH SPEED SPINDLE.

Manufactured only by the
National Ring Traveler Co.
Providence, R. I.
31 W. First Street, Charlotte, N. C.

Manufacturers Should Look Up the Advantages of

Metallic Drawing Roll

Over the leather system before placing orders for new machinery, or if contemplating an increase in production, have them applied to their old machiner production, have them applied to their old machinery. It is applied successfully to the following room machinery:

Railways	Detaching Roll for Combers
Sliver Lap Machines	Drawing Frames
Ribbon Lap Machines	Slubbers
Comber Draw Boxes	Intermediate Frames

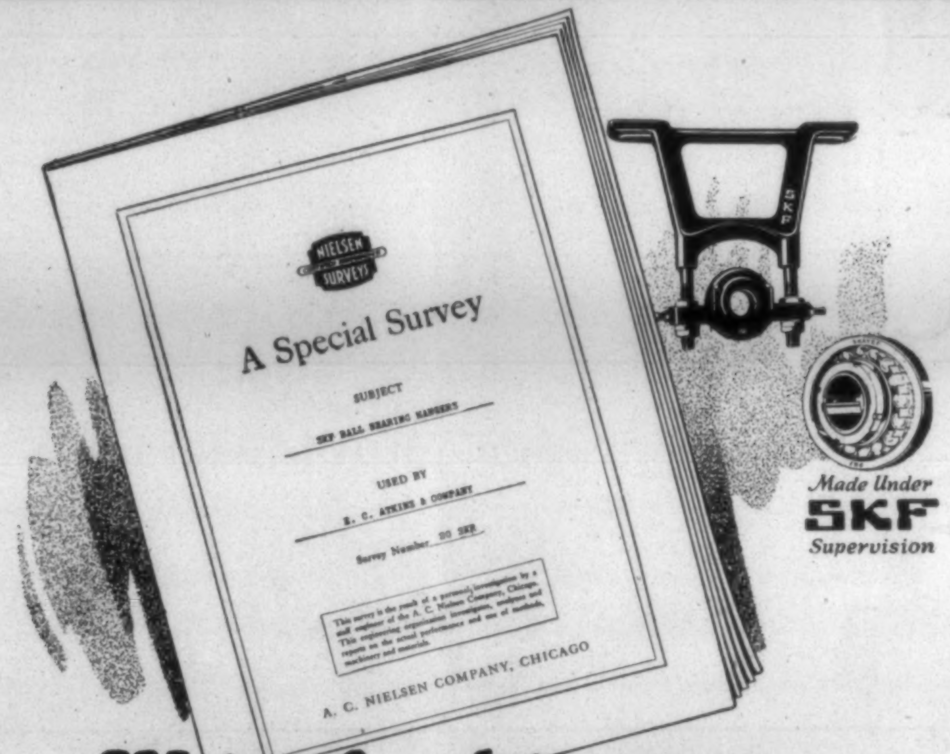
25 TO 33 PER CENT. MORE PRODUCTION GUARANTEED

For Prices and Circular Write to

The Metalic Drawing Roll Co.
Indian Orchard, Mass.

JOHN D. SPINKS, C. E.
Mem. American Society of C. E.
CONSULTING ENGINEER
Sewerage—Sewage Disposal—Water Supply—Streets
VILLAGE PLANNING
Winston-Salem, N. C.

THE TRIPOD PAINT COMPANY
—MANUFACTURERS—
ATLANTA GEORGIA
MILL WHITES, PAINTS, STAINS, Etc.
Write for Prices and Free Samples



NIELSEN SURVEYS

A Special Survey

SUBJECT

SKF BALL BEARING HANGERS

USED BY

E. C. ATKINS & COMPANY

Survey Number 20 SKF

A. C. NIELSEN COMPANY, CHICAGO

Made Under
SKF
Supervision

Write for this story of an $8,000.00 saving

BETWEEN the covers of this report are the findings of A. C. Nielsen Company, in an investigation of the performance of Skayef Ball Bearing Hangers used by E. C. Atkins & Company.

There are detailed figures of the saving in power, the comparative labor costs for oiling plain bearings and Skayef hangers, the cost of lubricants used, supervision necessary, and delays avoided.

All these figures are certified by the A. C. Nielsen Company. They are worth careful study on your part. For what Skayef Ball Bearing Hangers have accomplished in one plant they may easily do in another—in yours. Fill out the coupon below and mail it to us today.

1197

SKAYEF
Self-Aligning Ball-Bearing
HANGERS

THE SKAYEF BALL BEARING CO.
165 Broadway, New York City

Gentlemen:

Please send me a copy of the Nielsen investigation of the Skayef ball bearing Hangers used by E. C. Atkins & Company.

Name____________________

Street____________________

City__________ State__________

Company____________________

Type H S.
Type H D E.
Turbo.
Type H D D.
Type H D C.
The ParkSpray Humidifiers
Type N C Y.—Yarn Conditioner
Type N C S.—Plenum Air Conditioner

Where Do Better Humidifying Results Come From?

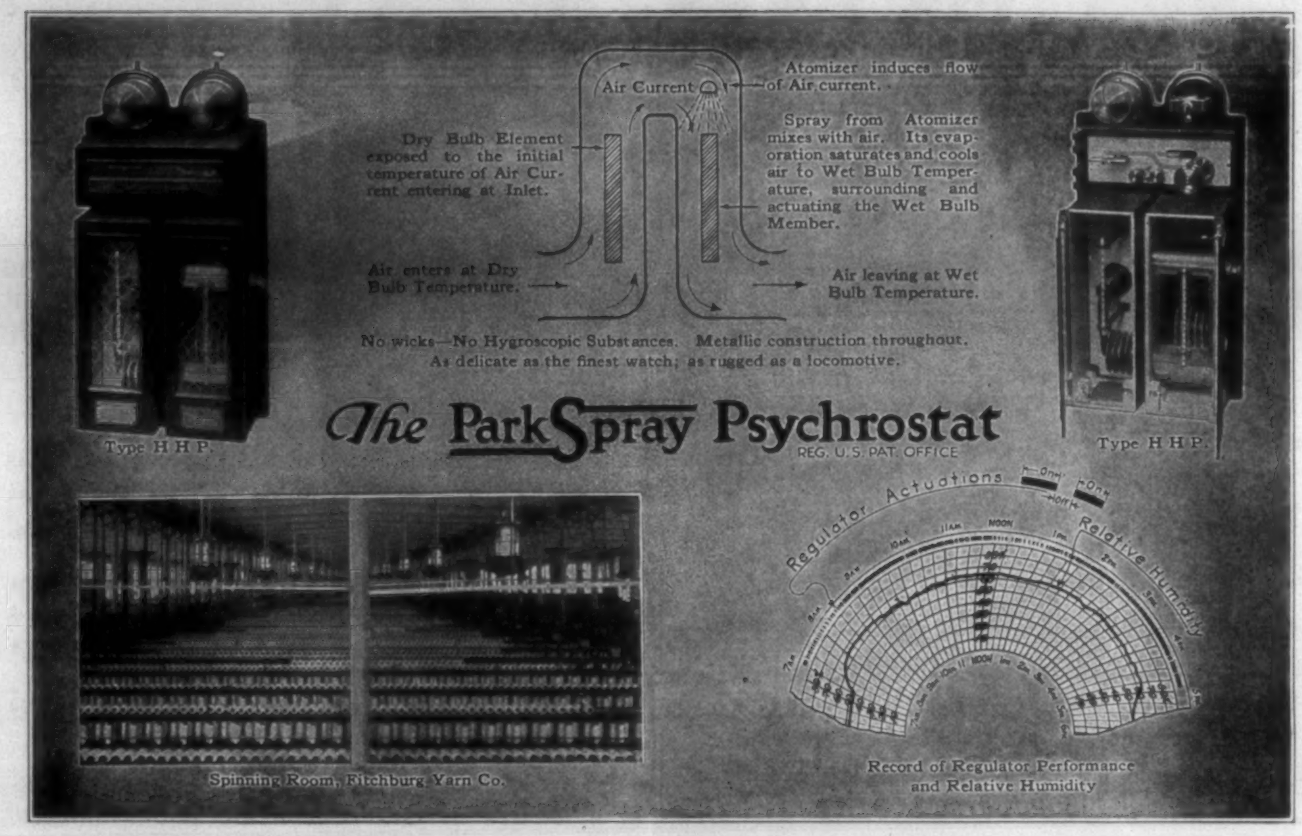
We did not discover humidity—artificial humidity is as old as wetting floors. We do not lay claim to having discovered the laws that govern humidity—they are still in the making. We do not pretend to have been the first to attempt to supply the demand for humidifying devices.

But since 1907 when we entered the field, much definite knowledge of humidity has been acquired; the laws that govern humidity have been earnestly studied so that they are now better known. We think we can lay claim to having had some part in this.

As time goes on more knowledge will be added. We expect to have a part in this, also—for we are constantly studying humidifying problems.

Supplying the proper humidifying apparatus is a combination of science and of experience. Humidifying experience is cumulative. Humidifying practice and skill and knowledge are improving. Where do better humidifying results come from—if not from those who have done the most developing.

Parks-Cramer Company
Engineers & Contractors
Industrial Piping and Air Conditioning
Fitchburg Boston Charlotte


Air Current
Atomizer induces flow of Air current.
Dry Bulb Element exposed to the initial temperature of Air Current entering at Inlet.
Spray from Atomizer mixes with air. Its evaporation saturates and cools air to Wet Bulb Temperature, surrounding and actuating the Wet Bulb Member.
Air enters at Dry Bulb Temperature.
Air leaving at Wet Bulb Temperature.
No wicks—No Hygroscopic Substances. Metallic construction throughout.
As delicate as the finest watch; as rugged as a locomotive.
The ParkSpray Psychrostat
REG. U.S. PAT. OFFICE
Type H H P.
Type H H P.
Regulator Actuations
On
Off
On
Relative Humidity
Spinning Room, Fitchburg Yarn Co.
Record of Regulator Performance and Relative Humidity

Progress Does Not Come From Standing Pat

Real honest-to-goodness Automatic Humidity Regulation started with us. Even now, the Psychrostat is the only psychrometric regulator that does not use a wick.

Parks-Cramer was the first to use copper for Spray or High-Duty Humidifiers; the first to add a fan and create a High-Duty type. And we couldn't trademark the name High-Duty—hence its now universal use.

The gravel filter tank idea you now insist on in High-Duty equipment. We didn't patent it; wanted to see the art improved. Nothing could do this more than purifying the water.

Aftercoolers in atomizer equipment were first made standard by us.

We have always insisted—and insist now—that humidification is only justified by results; that you can't get results without adequate capacity—a capacity that recognizes and anticipates the dryest condition; and then automatic regulation.

Parks-Cramer Company
Engineers & Contractors
Industrial Piping and Air Conditioning
Fitchburg Boston Charlotte

Profits Shrink in Dry Air

How many bales of cotton go thru your opening room daily?

What is the profit shrinkage per bale if this cotton is allowed to become dry and brittle? Concerns which have gone deeply into research on the question of Humidification and Air Conditioning have shown that "all the manufacturing operations in a cotton mill tend to make cotton dryer until at the time of shipment its humidity may have cost the mill as much as $5.00 per bale.

Suppose you stationed a man in your opening room with instructions to write a check for $2.50 every time a bale of cotton was wheeled in. Then each day you cashed the checks and threw the money in the boiler!

Sheer, criminal waste of good profits, you say, yet that is practically what many mills are doing today when they run without proper equipment with which to secure moisture regain in the finished yarn or cloth.

Suppose your raw cotton has a moisture content of 10 per cent (conservative estimate). Most of this moisture is lost in the opening room. Every succeeding operation dries out the fiber still more. The loss suffered by spinning dry cotton has been scientifically determined as follows:

With raw cotton at 15c the loss is $3.08 per bale.
With raw cotton at 20c the loss is $4.12 per bale.
With raw cotton at 25c the loss is $5.16 per bale.

Humidifiers put the moisture back gradually, step by step, until finally in the finished yarn or cloth the loss may be made up—REGAINED.

If you have not given Humidification and Air Conditioning serious thought, Do It NOW. Don't let the lack of properly regulated artificial moisture in your operating rooms shrivel up any more of your profits.

Engineering concerns that specialize on Humidification and Air Conditioning will gladly send you a ream of information on this vital subject. Get posted on this important subject. Stop the profit waste of dry cotton. DO SOMETHING ABOUT IT NOW!

Help To Keep The South Leading In Big Scale Production Of Quality Textiles

Better Equipment Campaign

This advertisement contributed to by the following firms:

Saco-Lowell Shops
Whitin Machine Works
H. & B. American Machine Co.
Fales & Jenks Machine Co.
Woonsocket Machine & Press Co.
Whitinsville Spinning Ring Co.
Crompton & Knowles Loom Works
Lestershire Spool & Mfg. Co.
The Stafford Co.
The Dana S. Courtney Co.
Fletcher Works
Easton & Burnham Machine Co.
Ashworth Bros., Inc.
Terrell Machine Co.
U. S. Bobbin & Shuttle Co.
Brown-St. Onge Co.
Mossberg Pressed Steel Corp.
S. K. F. Industries
John Hetherington & Sons, Ltd.
Textile Mill Supply Co.
Charlotte Mfg. Co.
Howard Bros. Mfg. Co.
B. S. Roy & Son Co.
Hopedale Mfg. Co.
Carrier Engineering Corp.
Barber-Colman Co.
The Root Co.
R. I. Warp Stop Equipment Co.
Hyatt Roller Bearing Co.
The Bahnson Co.
Link-Belt Co.
Cooper-Hewitt Electric Co.
Parks-Cramer Co.
Steel Heddle Mfg. Co.
H. W. Butterworth & Sons Co.
Fafnir Bearing Co.
Franklin Process Co.
T. C. Entwistle Co.

SOUTHERN
TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 39-41 S. CHURCH STREET, CHARLOTTE, N. C. SUBSCRIPTION $2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MAR. 3, 1879.

VOLUME 26 CHARLOTTE, N. C., THURsDAY, AUGUST 7, 1924 NUMBER 23

Humidifier Development

By William B. Hodge, of the Parks- Cramer Co.

THE history of humidifying goes back to almost the earliest period of textile manufacturing. Ancient weaving was carried on largely in cellars where even with poor light, the improved conditions due to dampness was recognized as essential to good quality.

The development of modern manufacturing machinery centralized textile manufacturing, especially cotton, in sections abundantly supplied with natural humidity.

As manufacturing extended into other localities, less favorably situated, artificial means were soon resorted to for the purpose of supplying deficient moisture conditions. In the early days the popular method was to wet the factory floors with sprinkling pots or to expose wet cloths where humidity was most urgently required.

These makeshift devices proved inadequate. The old type of vapor pot was developed to provide an improved method of securing higher humidities. The vapor pot was hollow casting connected with a supply of low pressure steam. The hot vapor escaped through vent holes in the top. This method constituted a considerable improvement over watering pots and wet cloths. It was more satisfactory during the cold weather than during the summer, because in hot weather the steam produced a stuffy and oppressive atmosphere. In England, so much objection developed to this type of humidifying that a "Cotton Cloth Factories Act" was enacted, which limited both temperatures and humidities in textile establishments.

The manifest objections to these several crude forms of humidifiers resulted in further development. What was originally known as the old "Spray" or "Vortex" type of humidifiers came into use to which water was supplied at pressure of 60 to 125 pounds. By means of a nozzle in each head, a fine spray was produced which was discharged into the room by the induction due to the spray water.

Almost coincidently with these, the early type of atomizer head was developed. Air under pressure was used tobreak up the water, and in a very inefficient and crude manner delivered free moisture into the air in a cloud-like spray, in a manner very similar to the present-day atomizer systems, but far less effectually, both as to distribution and power economy.

Humidifying in general drifted along without appreciable development beyond these until 1907, when with rapid development and speeding up of the textile machinery the matter of humidification was given special study by several manufacturers.

Attention was first directed to increasing the capacity of the spray type of humidifiers. Equipments were developed which by the aid of a small fan and motor on the top of each humidifier very largely increased its evaporative capacity. Also on account of the strong draft of air produced by the fan motor this moisture was distributed over a very much larger area. At once, more even humidity conditions over the room resulted and fewer units requiring oversight and attention on the part of the mill's working force were needed.

This type of humidifier was almost at once distinguished by the term"air conditioner",—due largely to the fact that it accomplished more than mere humidification. The large air-moving capacity created a cooling effect over the room during the hot weather, that could not possibly be secured from the spray type of humidifier alone.

In the winter time, by heating the supply water a very uniformly distributed source of heat aided materially in raising the temperature of different rooms on cold winter mornings, in much shorter time than by the ordinary heating system.

Again, fans drawing hot air from the top of the room and distributing it in the lower stratum produced a marked equalization of both temperature and humidity.

The large volume of air forced through the fine water spray was washed, cleansed and dropped to its wet-bulb temperature, resulting in greatly improved working conditions.

Almost all humidifier manufacturers immediately jumped into air conditioners embodying the forced-air-distribution principle. Developments have still continued, so that at the present time the designs are substantially 100 per cent more efficient in both evaporative and air handling capacity than they were when originally devised.

The modern high duty air conditioner unit will now evaporate from sixty to seventy pounds of water an hour at ordinary room temperature, and will distribute approximately 3,000 cubic feet of air per minute.

At higher water temperatures, the evaporation can be very largely increased, and distributed over wide areas with perfect uniformity.

Development of compressed-air atomizers head has been almost as equally rapid. The original type of compressed-air head evaporating 2 or 3 pounds of water per hour has been superseded by individual units evaporating from 10 to 15 pounds of water per hour, with approximately the same air consumption with air pressures averaging around 25 to 30 pounds. In the modern designs this spray is distributed over very much wider areas. The accessories, such as large air receivers and aftercoolers that condense out all moisture and oil, result in continuous operation of compressed-air heads for weeks and months at a time without any attention whatever other than the usual oiling and mechanical care of compressors.

Attention also should be called to the development of the fan central station apparatus. This was used largely in the early days, and to some extent today, merely to heat textile plants during cold weather. Blowing large volumes of bone-dry air that such a heating system provided, naturallly upset the humidifying conditions in the room, and regardless of the humidifying capacity in each room, whenever such fan heating systems were used the manufacturing conditions were seriously disturbed. At about the same time the development of the high duty air conditioner took place, attention was also devoted to the introduction of moisture into the ducts from the heating system leading to the respective rooms. This development resulted in an entire design of the heating and ventilating systems, in the respect that by means of suitably designed spray chambers and heater coils conditioned air could be delivered to each of the different departments at any predetermined temperature and humidity.

These central station systems have been developed to a high stage of efficiency, and today of all types of air conditioning equipment, they present one of the most interesting and effective means of maintaining uniform atmospheric conditions day after day throughtout the entire year. The chief objection to them is the high intial cost and the continuous expense of operation.

A modification of the central station equipment, minature in size has also been developed for special applicaion to yarn conditioning. The older method of storing yarn in damp cellars or treating with steam has been surplanted with this improved treatment, resulting in highly beneficial regains, setting of twists and general improved appearance in one quarter to one tenth the time formerly required for results that were not nearly so satisfactory.

At about the same time the high duty air conditioner was developed, numerous attempts were made to produce a rugged and practical humidity controler. The patent office bears record of the numerous ineffectual attempts that had previously been made to secure some kind of humidity control. Its desirability was universally admitted. Practically, there was no such thing. Humidity control is linked inseparably with Stewart W. Cramer, who probably realized the importance and grasped the practical requirements earlier and more completely than any one else working on this problem.

The earliest regulators, while crude, were tried out in many mills, and demonstrated conclusively the great value of humidity regulation. Almost immediately efficient humidity control demonstrated that very much higher humidities could be carried with wonderfullyy increased benefits in quality, production, and conservation of raw material.

From an originally complicated type of humidity control, continued experiments have evolved greatly simplified types of instruments both of the wet-and-dry and of the hygroscopic type. These are definitely guaranteed by their makers to function with minimum

(Continued on Page 31)

Carrier Central Station System

By a Representative of the Carrier Engineering Corporation.

THE above name applies to a system for automatically controlling the temperature and humidity in one or more departments of a building equipped with the Carrier system.

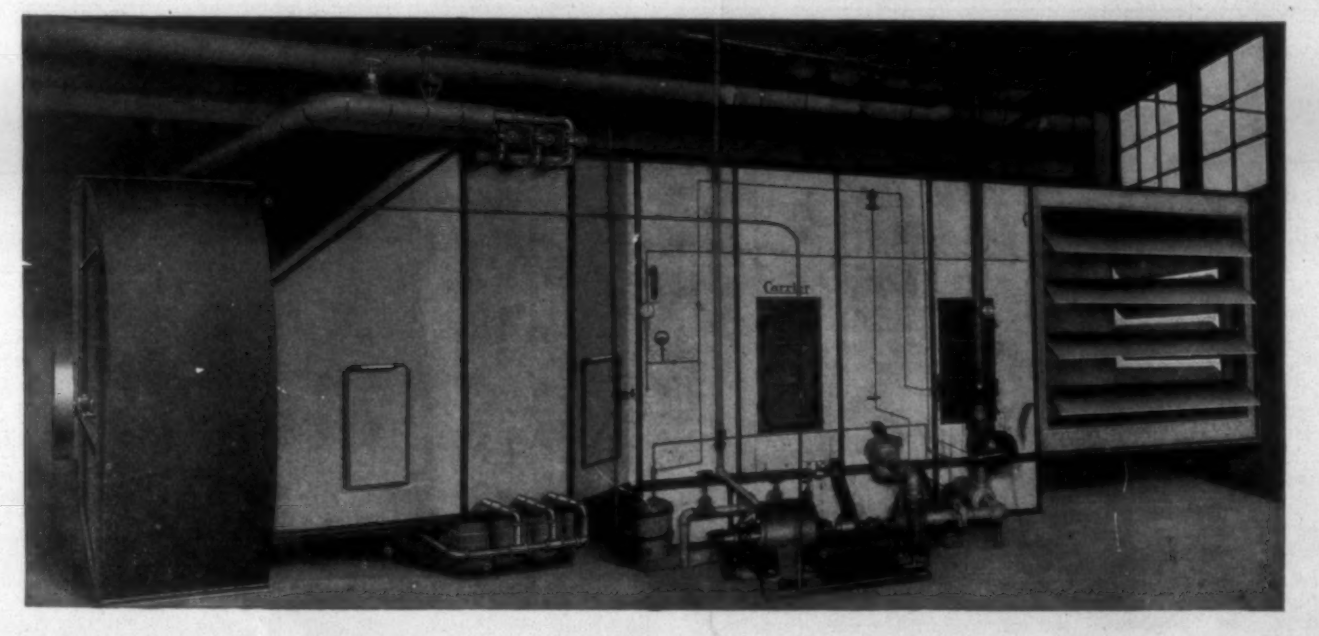


Fig. 1

In winter time this system maintains constant in every department which it serves that temperature which is best suited for the particular work done in the department. Different temperatures in different departments, as required, may be produced by the one main set of apparatus. Fuel or steam consumption is minimized by the automatic recirculation of as much air as the governing conditions will permit.

Of as great importance as the control of temperature is the control of the humidity or moisture content of the air and this is another function of this system. In its application to the textile industry, the automatic control of relative humidity, regardless of outdoor variations, avoids static, standardizes manufacturing routine, minimizes fly, reduces broken ends, and preserves adjustment of spinning frames and looms.

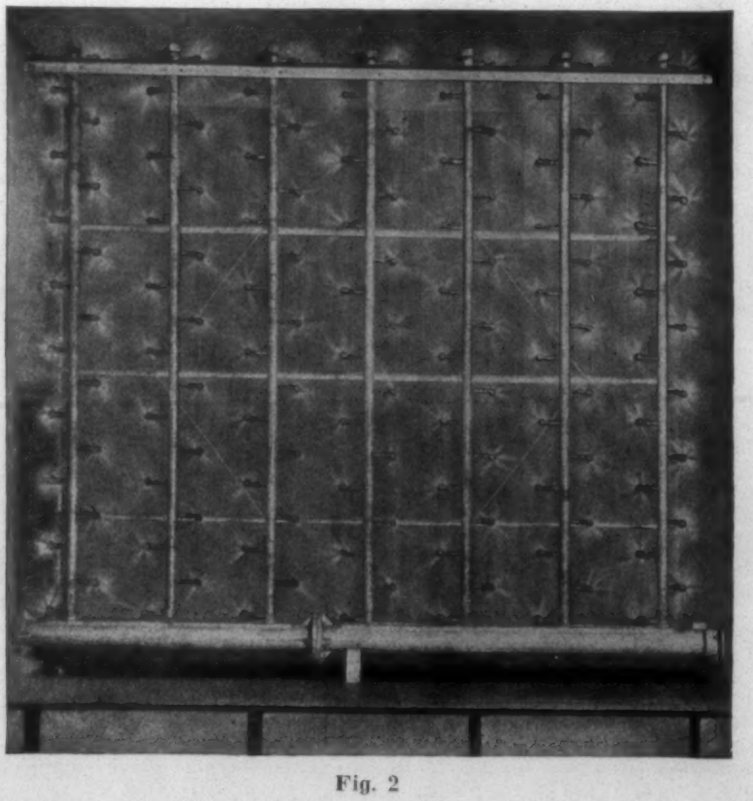


Fig. 2

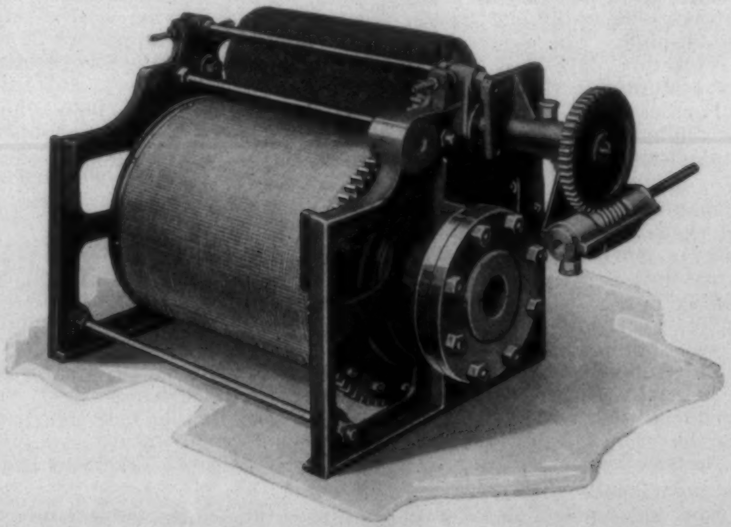


Fig. 3

Such control of temperature and relative humidity establishes a clean, comfortable atmosphere in which operatives are practically immune from respiratory diseases, and in which they are both mentally and physically alert, thus increasing production and improving quality.

In the summer time, in addition to the manufacturing advantages above enumerated, the Carrier system, because it conditions the air before it enters the mill, takes full advantage of the cooling effect due to evaporation, and keeps the mill cool and comfortable throughout the summer. This is accomplished automatically, without readjustment of either the apparatus or control and at no additional operating cost. Under summer conditions it is not necessary to keep the windows closed. A Carrier system introduces a great deal of air in the room and there must be some means of egress for this air. This is usually taken care of by means of the relief air duct or tower, but if the help desire it from a psychological standpoint, there is no reason why the windows cannot be left open, except when there is a sufficiently high wind outside to overcome the pressure produced by the fan and to force air into the room through the windows instead of allowing it to leave. The importance of summer cooling cannot be overestimated. Production is maintained at the maximum. Labor instead of being difficult to secure actually seeks out the Carrier equipped mill.

The Carrier central station system consists essentially of a humidifier (Fig. 1) fan, air distributing ducts, heaters, and the instruments for automatically controlling the humidity. Depending, of course, on the size of the mill, there may be one or more humidifiers, each with its fan, distributing ducts, etc. The humidifier and fans can be placed either in the basement or on the roof, or in an apparatus house ad-

(Continued on Page 10)

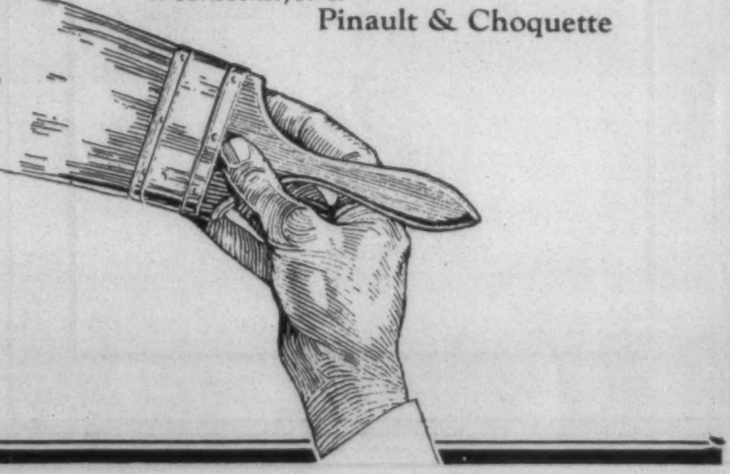
TRADE OJACO MARK

MILL WHITE

ECONOMICAL
because
of longer lasting
Whiteness.

Repaintings
are fewer and
farther between

"Save the surface and
you save all"– Paint & Varnish



Oliver Johnson & Co., Inc.
Makers of Paints for all Industrial Purposes
18-24 Custom House Street
Providence, R. I.

DISTRIBUTORS:—

Boston, Mass.	**Lewis E. Tracy Co.**
Charlotte, N. C.	**Charlotte Supply Co.**
Columbia, S. C.	**Columbia Paint Company, Inc.**
Fall River, Mass.	**Wm. F. Harticon**
Greenville, S. C.	**Frank R. Henry & Co.**
Holyoke, Mass.	**J. Russell & Co.**
Rochester, N.Y.	**E. P. Van Hosen Co.**
Syracuse, N. Y.	**Paragon Plaster Co.**
Utica, N. Y.	**American Hard Wall Plaster Co.**
Woonsocket, R. I.	**Pinault & Choquette**

TRACTION

Ladew Leather Belting is remarkable for its traction properties—the ease with which it pulls its load.

This is because the leather in Ladew belts is tanned and curried by special processes that preserve all the gripping qualities. Ladew belts cling closely to the pulley, forming a greater arc of contact. Slippage is reduced. Power is delivered with the least waste.

The processes that give Ladew belts their unusual grip also give them mighty strength. Their rugged leather resists wear. They are built right—based on the experience gained by making good belts since 1835. Their faithful performance cuts belting costs. You will be pleased with the service they will render in your plant.

EDW. R. **LADEW** CO., Inc.

BELTING AND OTHER LEATHER PRODUCTS

Since 1835

29 MURRAY STREET NEW YORK CITY

Atlanta, Ga.
Boston, Mass.
Cleveland, Ohio
Chicago, Ill.

Glen Cove, N. Y.
Newark, N. J.
Philadelphia, Pa.
Pittsburgh, Pa.

OUR FIELD
HOYT BELTING
EDW. R. LADEW CO. INC.
SINCE 1835
TRADE MARK

Carrier Central Station System

(Continued from Page 8)

jacent to the mill. The inlet of the humidifier is connected with the rooms to be humidified by means of a return air duct, and to the outside through a fresh air duct. Both these ducts are equipped with dampers so that in the winter the air may be returned and in the summer. all outside air may be delivered to the mill.

The air drawn through the humidifier by the fan passes through a finely atomized spray of water, which completely saturates it and cools it to the wet bulb temperature of the entering air. This spray is maintained by means of a direct connected motor-driven centrifugal pump, which delivers water to the spray nozzles (Fig. 2) at a pressure of 35 pounds. This spray water is recirculated, a definite water level being maintained in the humidifier by means of a ¾" float valve connected with the city water supply. With this arrangement a small amount of water is used, as all water except that which is actually evaporated by the air, is returned to the sprays. A rotary strainer (Fig. 3) is placed on the suction side of the pump, and a pot strainer (Fig. 4) on the discharge side. This reduces to a minimum the necessity of cleaning the spray nozzles.

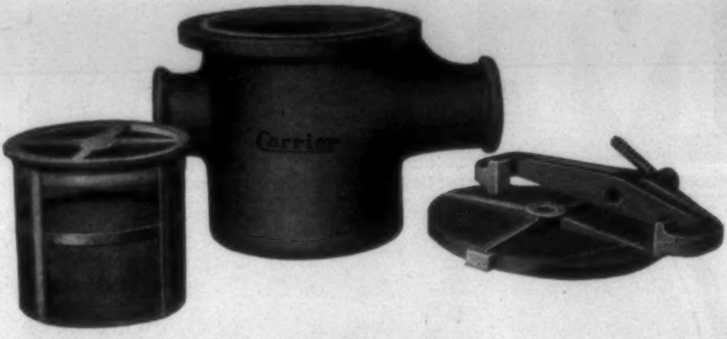


Fig. 4

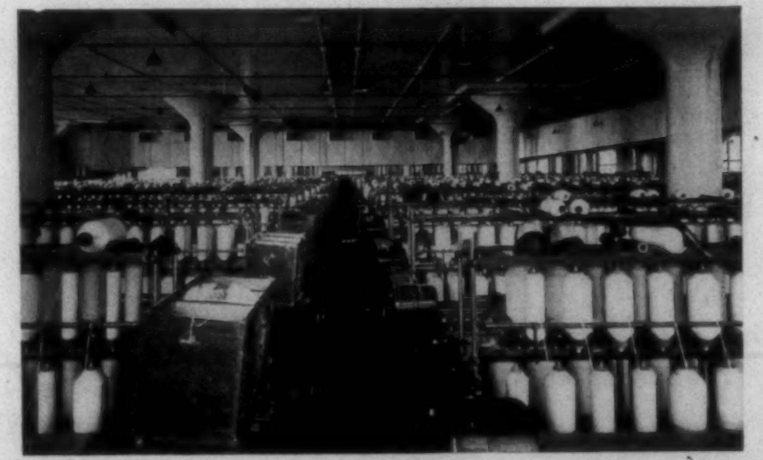


Fig. 5

The air distributing system consists of a vertical riser either built of brick or concrete integral with the mill, or of galvanized iron running inside the mill, together with the horizontal galvanized iron ducts hung from the ceiling of the room to which the air is supplied. These ducts are equipped with Carrier diffuser outlets which eliminate troublesome drafts caused by the effect of high velocities. The typical duct system shown by Fig. 5 is the drawing room of the Jackson Mills, Nashua, N. H. Note that the duct is built with standing seams, the seams being positively locked in position by means of a button punch, rivets or bolts being used at points of great strain. Each sheet is creased diagonally in both directions, so stiffening the sheet that absolute freedom from vibration or noise is assured. This duct construction insures extremely rigid and substantial work, is remarkably air-tight and unusually pleasing in appearance. In cases where ducts are not desirable the construction shown in Fig. 6 (Bay State Cotton Mills, now New England-Southern Mills, Lowell, Mass.) may be used. In this case air is delivered through the diffusers located on both sides of the room. The air is brought to these diffusers through vertical risers which come from the humidifiers located in the basement.

In existing mills it is sometimes difficult to find space either in the basement or on the roof in which to put the apparatus, and there is also liable to be some difficulty in erecting the vertical risers for carrying the air to the different floors. Under such conditions the Carrier unit system can be used. This consists essentially of several minature central stations, and will give practically the same results as the Carrier central station system. Fig. 7 shows one of these units which consists essentially of a fan, heater, spray nozzles and distributing ducts. The length of the units can be varied from 50 to 150 feet. All the

(Continued on Page 32)

DU PONT DYESTUFFS

SULFANTHRENE BLUE G PASTE
SULFANTHRENE BLUE GR PASTE

The du Pont Company announces large scale production of these new blues similar to the pre-war

HYDRON BLUE G
HYDRON BLUE R

Due to the care exercised in the manufacture of these dyestuffs, brightness and solubility are extremely good; the shade being brighter than the pre-war types.

The cotton industry throughout the world has recognized in Hydron Blues one of the most important developments since the introduction of vat dyes. Because of their excellent fastness to washing and light as well as chlorine, and their easy application in beam and other circulating-type machines,

SULFANTHRENE BLUE G PASTE
SULFANTHRENE BLUE GR PASTE

are recommended for certain classes of work where the use of sulfur blues or of indigo would not give satisfaction.

E. I. DU PONT DE NEMOURS & CO., Inc.
Dyestuffs Department
WILMINGTON DELAWARE

STANDARD~UNIFORM

ESEEOLA
INN

LINVILLE, N. C.

Golfing

An 18-hole course in splendid condition. Write for schedule of golf events.

Fishing

Trout fishing is fine and good catches are being made.

For Reservation or Information

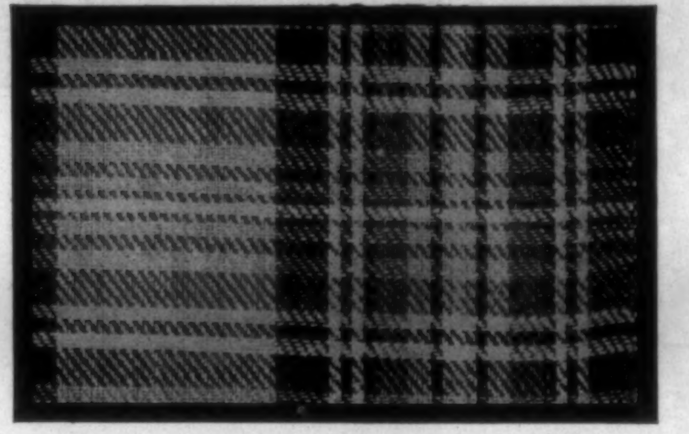
Address:

E. G. Fitzgerald
Manager

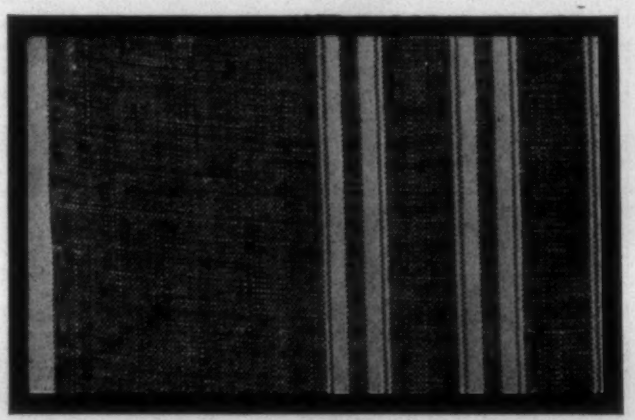
Eseeloa Inn :-: Linville, N. C.

Imported Cotton Cloths

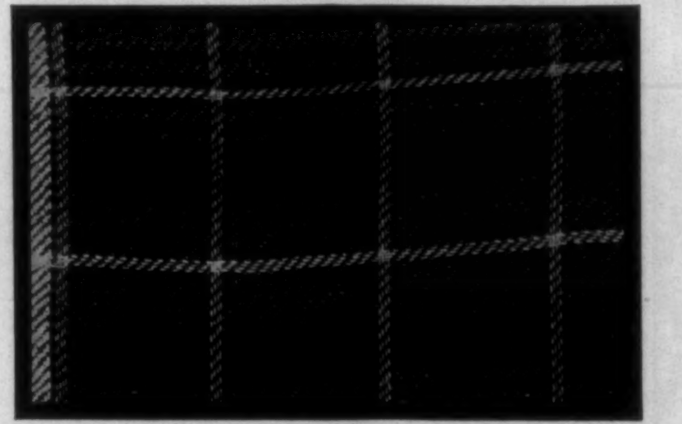
From Survey of United States Tariff Commission.



Sample No. 44.—Tartan Plaid.
Twill woven (4-harness) on box loom. Finished width, 36 inches.
65 ends and 51 picks per square inch, finished.
Warp yarn, 21s, dyed, 21s, bleached. Filling yarn, 26s, dyed, 26s, bleached.
Weight, 4.21 linear yards (4.21 square yards) per pound, finished.
Green, yellow, black, white, and red warp; lavender, yellow, black, white, green, and red filling.



Sample No. 45.—Striped Ticking.
Plain woven. Finished width, 32 inches.
97 ends and 70 picks per square inch, finished.
Warp yarn, 24s. vat dyed, 24s bleached. Filling yarn, 33s, bleached.
Weight, 3.71 linear yards (3.30 square yards) per pound, finished.
Blue and white warp; white filling.



Sample No. 46.—Tartan Plaid.
Twill woven (4-harness) on box loom. Finished width, 36 inches.
56 ends and 62 picks per square inch, finished.
Warp yarn, 32s, dyed. Filling yarn, 26s, dyed.
Weight, 5.33 linear yards (5.33 square yards) per pound, finished.
Red, black, blue, and green in both warp and filling.

HOUGHTON

REVENGE

By Chas. E. Carpenter

On Board
The Yacht FRANEDA
Port of Beach Haven, N.J.
Aug. 4, 1924.

BEHOLD him!

This is his Excellence the Captain of the Yacht FRANEDA who makes so bold as to tell me how to write copy.

This is the guy who, when this publication called for copy, and my Secretary brought the call aboard at a time when I was preparing to take a party down to the Barnegat Inlet fishing, advised me to print a photograph of myself at work in the cabin of the yacht, claiming that the readers of that advertisement would feel so sympathetic that we would be inundated with orders.

Here is what actually happened, as set forth in an S. O. S. letter received from one of our New England Distributors:

"For the love of Mike can that yacht stuff. Almost every man I see refuses to buy because he says he cannot afford to pay for private yachts; and a substantial number want to know how the Old Man can expect the rest of us to work while he is publishing his photograph aboard a palatial yacht. If you have any pity for the salesforce sink the damned yacht."

All of which goes to prove that advice is good, providing it comes from the proper source. Who is to blame because advertising copy was sent out on the suggestion of a yacht captain? The captain? Well I guess not. The fellow who sent the copy to press. That's I.

But it did attract attention at that.

E. F. HOUGHTON & COMPANY

Works: Philadelphia—Chicago—Detroit

Distributors Located At

ATLANTA, GA.	GREENSBORO, N. C.	GREENVILLE, S. C.	ST. LOUIS, MO.
1001 Healy Building	P. O. Box 81	511 Masonic Temple Bldg.	418 N. Third St.
Phone: Walnut 4651	Phone: Greensboro 1990	Phone: Greenville 2316	Phone: Olive 3559

AND IN EVERY OTHER TEXTILE MANUFACTURING CENTER OF THE WORLD

Oils and Leathers for the Textile Industry

Bahnson Humidifiers

By the Bahnson Company.

THE origin of the Bahnson Company dates back some twenty years. It is the outgrowth of experimental work on the part of Mr. John W. Fries, pioneer textile manufacturer of Winston-Salem, in the developing of air conditioning machinery, which resulted in the production of a small, self-contained air washing machine, which, after a number of tests, showed that it would produce fairly good results as a humidifier.

In 1905, Mr. F. F. Bahnson entered the employ of Mr. John W. Fries to take charge of experimental work, and this work in combination with Mr. Fries' ideas led to the production of the first Hygrosso Humidifier which was brought out about 1909.

In 1912 Briggs-Shaffner Company, of Winston-Salem, took over the manufacture and sale of humidifiers under the John W. Fries patents and Mr. F. F. Bahnson entered the Briggs-Shaffner organization at that time. In 1915 the Normalair Company was formed and acquired from Briggs-Shaffner Company all rights under the John W. Fries patents. The Normalair Company was organized with Mr. A. H. Bahnson as president and business manager, and Mr. F. F. Bahnson in charge of the engineering work. The Hygrosso humidiger, with some improvements, was then marketed under the name of the Normalair humidifier.

A careful study of the action of the Normalair humidifier in commercial installation indicated that

(Continued on Page 18)

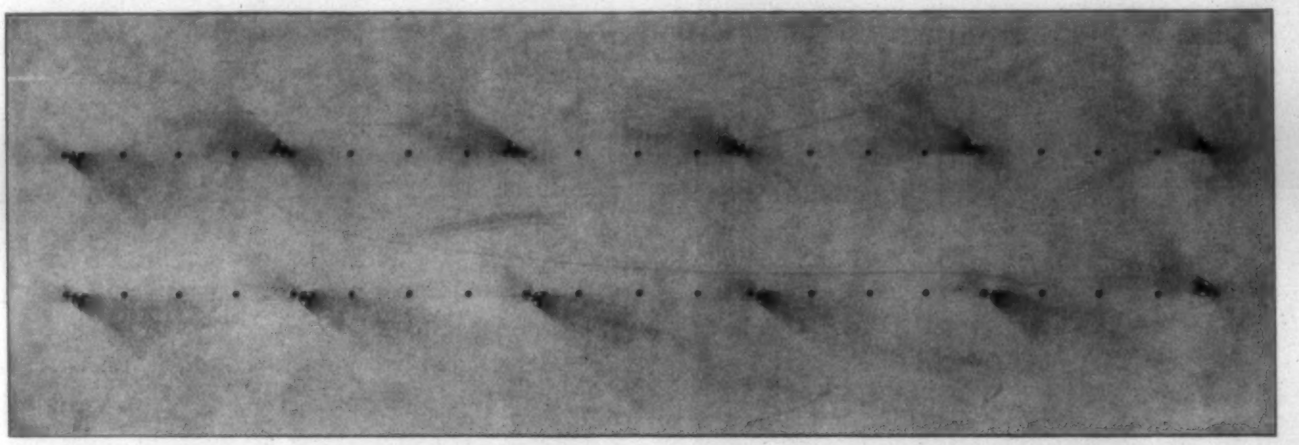
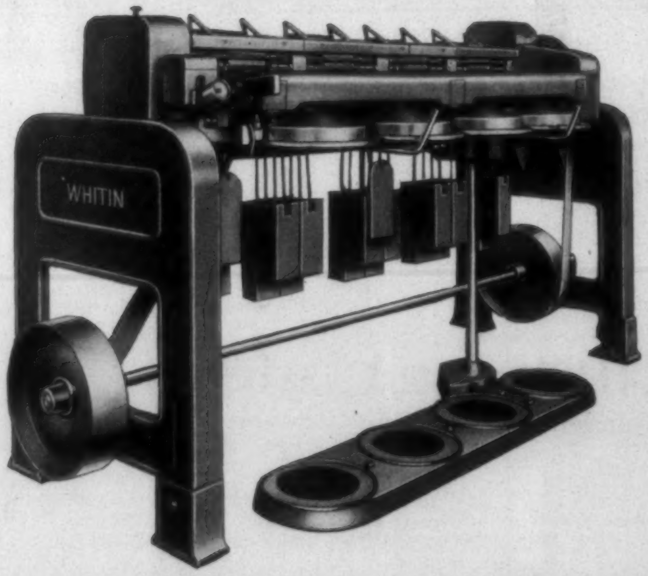


Diagram of an installation of Bahnson Humidifiers showing distribution of humidified air. The fan on the Bahnson Humidifier creates a horizontal circulation of air which assures an even distribution of the moisture. There is also an automatic control on the Bahnson Humidifier which graduates the feed of water to the humidifier in accordance with the conditions of the air.



WHITIN MACHINE WORKS
ESTABLISHED 1831
TEXTILE MACHINERY

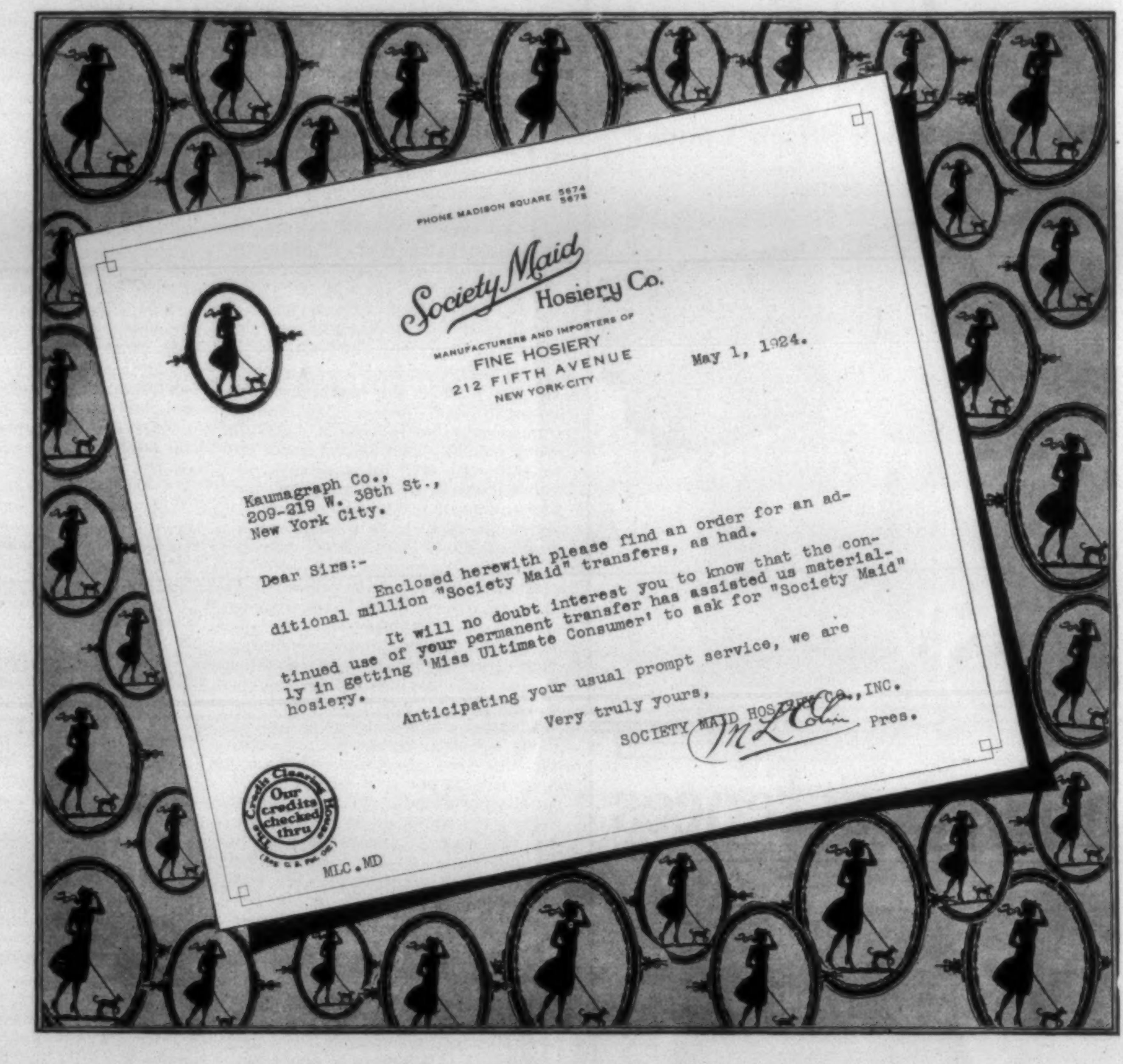
IMPROVED WHITIN
MODEL H
DRAWING FRAME

NEW WEIGHTING
NEW STOP MOTION
NEW GEARING
NARROWER WIDTH

EASY TO RUN AND ERECT
Ask for Particulars

MAIN OFFICE AND WORKS
WHITINSVILLE, MASS., U.S.A.
SOUTHERN OFFICE CHARLOTTE N.C.

Won't wear off, wash off, tear off!



PHONE MADISON SQUARE 5674
5675

Society Maid Hosiery Co.
MANUFACTURERS AND IMPORTERS OF
FINE HOSIERY
212 FIFTH AVENUE
NEW YORK CITY

May 1, 1924.

Kaumagraph Co.,
209-219 W. 38th St.,
New York City.

Dear Sirs:-

Enclosed herewith please find an order for an additional million "Society Maid" transfers, as had.

It will no doubt interest you to know that the continued use of your permanent transfer has assisted us materially in getting 'Miss Ultimate Consumer' to ask for "Society Maid" hosiery.

Anticipating your usual prompt service, we are

Very truly yours,
SOCIETY MAID HOSIERY CO., INC.
M L Cohn Pres.

The Credit Clearing House
Our credits checked thru
(Reg. U. S. Pat. Off.)

MLC.MD

Second only to the beauty of Society Maid Hosiery is the Society Maid Trademark—applied with Kaumagraph Dry Transfers at the rate of 80 dozen pairs an hour.

Your trademark applied with Kaumagraphs will not wear off, wash off or tear off. Ask our Service Department to help you design a trademark or to show you the quickest, handsomest and easiest way to apply it.

KAUMAGRAPH COMPANY
Established 1903
7 E. Third St. . . . . . Charlotte, N. C.
New York Boston Chicago
Philadelphia.
Paris, France Paris, Ont., Can.

For trademarking textiles, hosiery, silks, underwear, etc. use—

Kaumagraphs

John W. Hepworth & Company

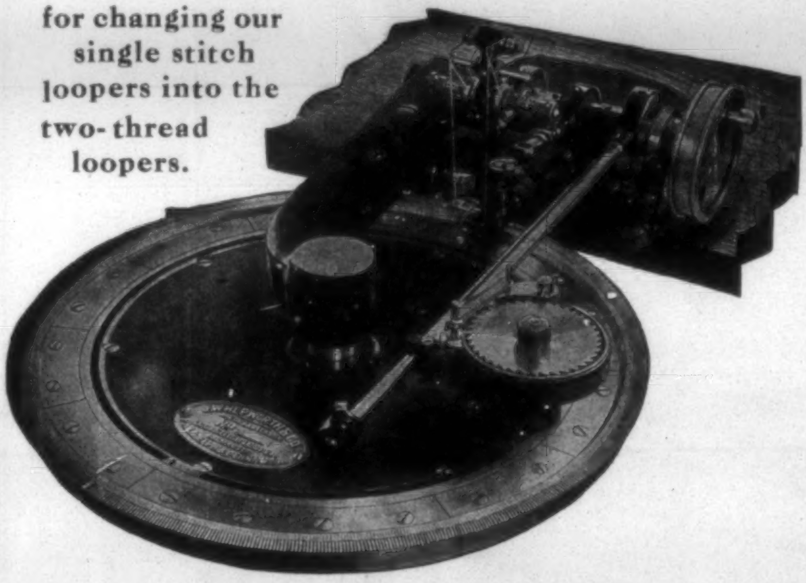
N. W. Cor. Lehigh Ave. and Mascher Street
PHILADELPHIA, PA.

Makers of

Two-Thread Elastic Lock Stitch Looper

Also Attachments

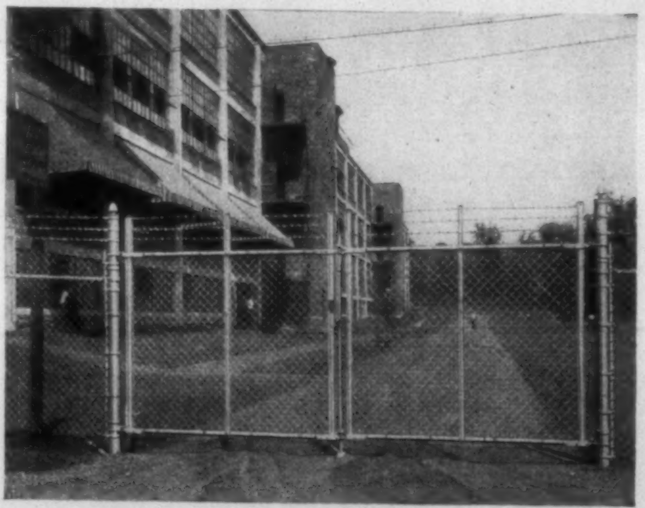
for changing our single stitch loopers into the two-thread loopers.



FIRM—BECAUSE THEY ARE ANCHORED

Anchor Post Fences

PERMANENT—BECAUSE THEY ARE GALVANIZED



STRONG FACTORY GATES

Electrically Welded at every corner, rigid and strong throughout their length, they cannot sag. **Galvanized throughout.** As impregnable and unclimbable as Anchor Post Chain Link Fence.

Telephone or write our nearest office or sales agent for complete information.

Anchor Post Iron Works: 52 Church St., New York, N. Y.
CHARLOTTE, N. C.: R. M. Lane, P. O. Box 1375; GREENVILLE, S. C.: H. H. Orr, 315 Palmetto Bldg.; SAVANNAH, GA.: C. M. MacLean Co., 20 East Bay St.; ATLANTA, GA: Beaullieu & Applewhite, Citizens Southern National Bank Bldg.; BIRMINGHAM, ALA.: C. S. Caldwell, 2011 Third Ave.
Sales Agents in OtherCities

Advantages of Better Mill Equipment

Articles Submitted in Prize Competition On This Subject

Number Twenty-four

I understand that this contest is to show the advantages of a modernly equipped mill over an old mill equipped with obsolete machinery and in fact to be able to state clearly what the advantages are of a modernly equipped plant. In order to do this we would necessarily have to know something of the disadvantages of a mill with obsolete or wornout equipment. Having been in the mill for over thirty years and having been a superintendent for over 20 years I have had experiénce in both.

The disadvantages of a mill equipped with old machinery are many; in fact, they are too numerous to mention. Strictly speaking when we say old mills we mean old machinery. Old mills always involve ideas in inefficient labor, low percentage of production, low quality, high cost, high percentage of waste, high percentage of seconds. You cannot secure and hold efficient help when you have poor machinery, a poor mill and a poor village. For example, let us take a mill of 25,000 spindles, spinning 20s. Our machinery was installed 35 years ago and has not been overhauled for the past eight years and never was thoroughly overhauled. There are such mills. We are making four-yard sheetings. Our production is 60 per cent, or about 1.75 pounds per spindle per week, 43,000 pounds per week of 60 hours. We pay our warp spinners 22½ cents per side per day. By hard fighting they can run eight sides. We pay our filling spinners 25 cents per side per day and a good spinner can run 6 sides. We pay all through the mill in proportion to the spinning.

The market price for such spinning we will say is 12½ cents per yard, 50 cents per pound. We get ours off at 11½ cents, 46 cents per pound; 20 per cent waste, 10 per cent seconds. A tabulation of costs is as follows:

Weekly supply of cotton for 43,000 pounds at 30 cents per pound	$ 15,480
Labor cost per lb., 10 cents, 43,000	4,300
Overhead at least 6 per cent, 43,000	2,500
Manufactured cost 43,000 lbs. at 46 cents	$ 22,360
43,000 lbs. at 46 cents	19,780
Weekly loss	2,540
Annual loss	129,000

I could go into details showing the cost of each department, but the figure $129,000 annual loss shows the real disadvantage of old equipment. I know of several mills that are doing even worse than this.

Now, take the same mill, 25,000 spindles, put a roof on it, a new floor in it and equip it with well arranged modern equipment, with plenty of floor space for mixing cotton, provision for all daylight possible, individual motor drives, roller bearings on every machine where they can be used to advantage, the best of cards, card clothing, drawing frames and fly frames, carding about 700 pounds to each 60 hours on 20s 4-yard sheeting.

We would also want wide gauge spinning, no separators, tape drive, the filling wind or build, and automatic looms. We get on average 20s 3 pounds per spindle per week of 60 hours, or 75,000 pounds. Warp spinners run 16 sides at 18 cents per side. Filling spinners run 14 sides at 20 cents per side per week. Production would be 100 per cent, seconds 2 per cent, waste 8 per cent, labor cost 6½ cents.

Weekly cotton supply 81,000 at 30 cents	$ 24,300
Labor cost 6½ cents per lb. on 75,000 lbs.	4,875
Overhead 4 cents per lb.	3,000
Weekly manufacturing cost	$ 32,175
75 000 lbs. cloth at 50 cents per lb.	37,500
Weekly profit	$ 5,325
Annual profit	266,250

The figures $266,250 show the real advantage of the up-to-date equipment. However, dollars and cents, or profits, are not all. Modern mills, modern machinery, modern conditions make better boys and girls, better men and women and better Americans and would keep more superintendents and overseers in the fight 20 years longer than they can stay in some few mills that are yet in operation, or trying to operate.

The Difference.

Number Twenty-five

Textile machinery has a definite period of usefulness determined by its wear and obsolescence. Abuses in oiling and lack of repairs increase the wear, while new inventions often make imperative the replacement of machinery even in good working condition. So the automatic loom and the high speed warper can be operated at so much cheaper direct cost and give so much greater production, with resulting smaller overhead per unit, that the first practically eliminate the plain loom on coarse and memium goods, while the latter will probably win after a short struggle. The latest models of other cotton machinery, though not showing as great improvenemt, can often claim the following advantages over the old worn-out equipment:-

Smaller labor costs and greater output, less floor space, less power and handling between processes. In many cases, the main working parts operate better, can be finer adjusted, and once adjusted do not require continuous attention and re-setting. This improves the run-

(Continued on Page 25)

Fundamental Issues in Southern Industrial Life Today

Address of Alexander Long before Southern Industrial Conference.

IF the question had been asked twenty-five years ago, what was the, fundamental issue in Southern industrial life, the answer in a majority of cases would have been "the manufacture of the best goods at the lowest possible cost." As a natural result of that conception, there came about the unfortunate social conditions in the lives and fortunes of the operatives, which justified to some extent, governmental interference.

In my remarks today, I am assuming that the textile industry is uppermost in the minds of all, as it predominates in this section, and is the one with which I am most familiar.

The building of cotton mills in our Southern country began in earnest about 1885 and has grown steadily since, until a large proportion of our cotton crop is now consumed at home.

Previous to the building of mills, we depended almost entirely on agriculture. Great numbers of families who had not made a success of farming, or from other causes, were drawn to the mills, where they found better homes and were able to make a living. This was a great relief to many, especially those families who had no men workers, and all members of the family from ten years up were able to earn wages.

Naturally at first, the main idea of the management was to earn a profit on the investment, little thought being given to the human side, and as a consequence conditions were none too good. People of all sorts and conditions flocked to the mill villages and mill after mill was built, until the "cotton mills and the cotton mill people" became a distinct and very live issue in several of our Southern States.

All are familiar with economic questions that have arisen and been fought over in our political campaigns and in our legislative halls, and while some problems have been worked out satisfactorily, new ones are constantly coming up to unsettle the economic conditions and cause friction.

It was only a few years after the industry assumed large proportions that many heads of enterprises, who had big hearts and broad vision, began to think of their people and to provide those things that lead to good citizenship and to the educational and spiritual upbuilding of those in and outside of the mill. Today, the mill manager is rare who does not see that his village has every advantage in the way of schools, churches, amusements and all community pleasures that are enjoyed by the most favored towns.

In fact, this great business is in charge of men who, almost without exception, are strong in their religious convictions and who are living up to the responsibilities of their positions toward their people and their country.

With reference to the people who constitute our mill communities, I do not hesitate to say that they now compare favorably with any other people who have had the same advantages.

While wonderful progress has been made, and I am confident that there will be no let-up, still it is well to face the issues that are ever present, and avoid all mistakes possible.

I will discuss this subject:

1. From the Standpoint of the Management.

I would remind you that if industry survives, it is necessary to earn dividends, and in addition, to set aside enough to cover depreciation and to provide a reasonable surplus; in fact, this is the first duty of a manager; but he can better accomplish this by accepting the fact that no company can prosper without the good will of its employees. To secure this indispensable cooperation, he must, either from a selfish or a broad humanitarian standpoint, so consider their welfare, both material and spiritual, as to convince them that he is looking after their interests to the very best of his ability.

The manager of any enterprise, be it cotton mill, coal mine, steel mill, or any other large business, finds it necessary to be a many-sided executive, performing almost every function in the community.

It is necessary for him to be prepared on almost any subject, and have his decision ready at a moment's notice. He must be posted on the conditions that now obtain and be prepared to provide good houses, well equipped with modern conveniences, good streets, well lighted, good churches, good schools, both day and night schools, good social service, such as community workers, community nurses and Y. M. C. A. secretaries. Add to these necessary buildings, playgrounds, and other equipment, that his people may be able to find everything they actually need at home, and the community thus becomes a real center to them.

Furthermore, he must so conduct the affairs of the company as to secure the confidence of the community and their faith in his justice and fair-play.

He must pay such wages as will give a fair return to the company, and at the same time enable his employees to live in reasonable comfort by working full time at their jobs, giving a full day's work for a full day's pay.

He must keep his plant in such condition that the health of the workers will be protected, and everything reasonable done for their safety and comfort while at work.

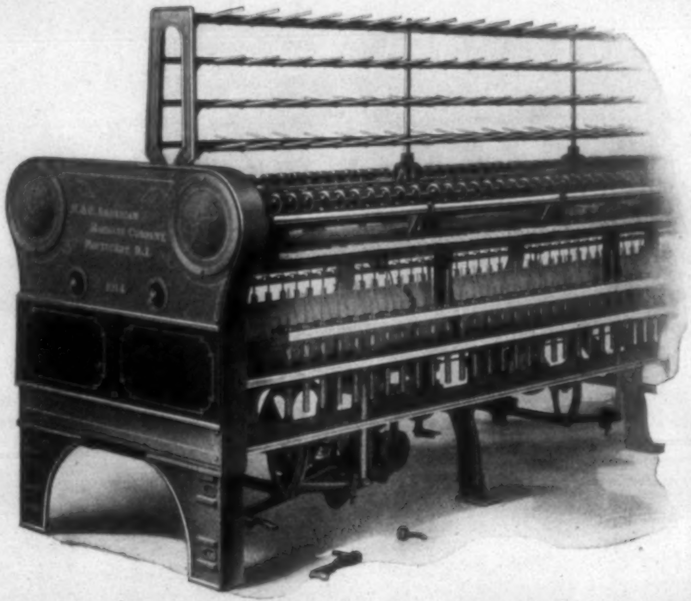
In addition to the many things that constantly confront the manufacturer, the question of raw ma-

(Continued on Page 26)

COTTON MACHINERY

IMPROVED TWISTERS

FOR WET OR DRY TWISTING



The illustration above shows the Head End Section of our Improved Twister. This machine, like our Spinning Frame, is of Heavy Construction, which insures light running and reduces vibration and cost of upkeep. We build these machines in all Gauges and for any number of ply with either Band or Tape Drive. There are many distinctive features in our machine which we describe in a Special Bulletin.

List of Users and Descriptive Bulletin sent on request

H & B

American Machine Co.

Pawtucket, R. I.

Southern Office

814-816 Atlanta Trust Co. Bldg.

Atlanta, Ga.

Bahnson Humidifiers

(Continued from Page 14)

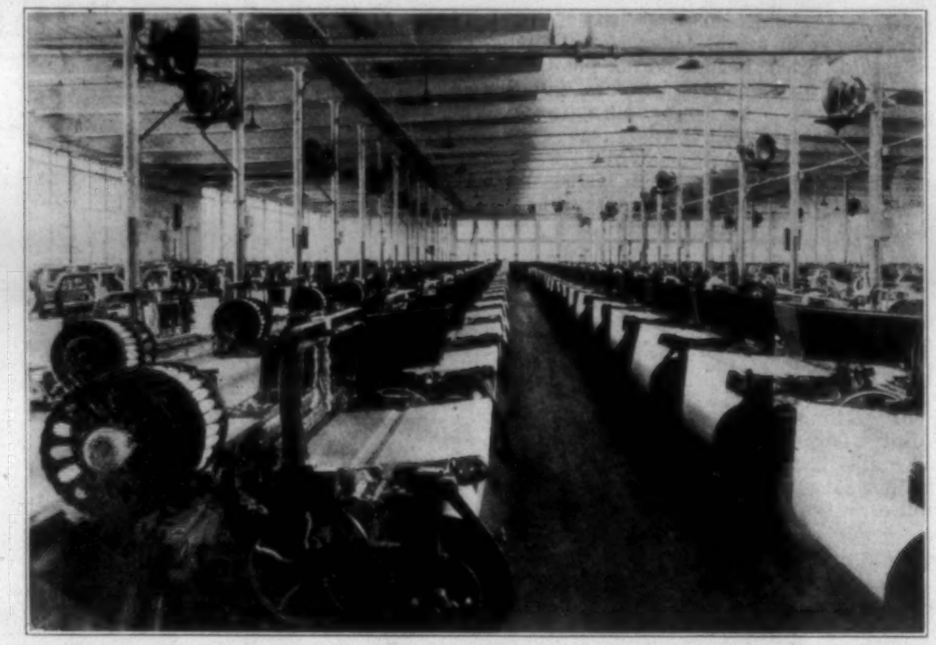
there was opportunity for a very great improvement and a research organization of highly trained men devoted their time for several years to the development of a new type of humidifier in which the good points of the Normalair machine were utilized and the defects were overcome. This led to the formation in 1918 of the Bahnson Company and the new machine under patents issued to F. F. Bahnson was marketed as the Bahnson humidifier.

The Hygrosso humidifier, with some midifier is a self-contained, complete humidifying system has made it valuable for use in a very large number of installations where small spaces are to be humidified. This self-contained feature of the Bahnson humidifier is of the same type of individuality which made the American troops so highly efficient during the World War. Each man felt his own individual responsibility and acted upon it, but at the same time understood fully the necessity and value of co-operative action when the best interests of the cause demanded it. In the same way the Bahnson humidifier is peculiarly adapted to large installations because the units are so designed and arranged that while each one cares for its own particular area, the whole equipment works in perfect harmony so as to obtain the results desired.

It may be of interest to textile men to know that Bahnson humidifiers are used in industries other than textiles.

The similarity between tobaccos and cotton is quite apparent and any cotton manufacturer understands on a little reflection that the dryness and brittleness of cotton under too low humidity will of course be duplicated by tobacco under similar conditions. It is just as hard to manufacture cigars out of dry tobacco as it is to spin good yarn out of dry cotton.

A great many Bahnson humidifiers are used in bakeries to prevent drying out and crusting of the dough during its first period of fermentation or rising. The time required for this is between three and four hours and in a relative humidity less than about 70 per cent the moisture is apt to dry out from the dough, leaving a crusty formation over the top. There is no subsequent process which will moisten the crust so formed, and consequently crusting in the dough room means hard flakes often in the middle of a loaf.



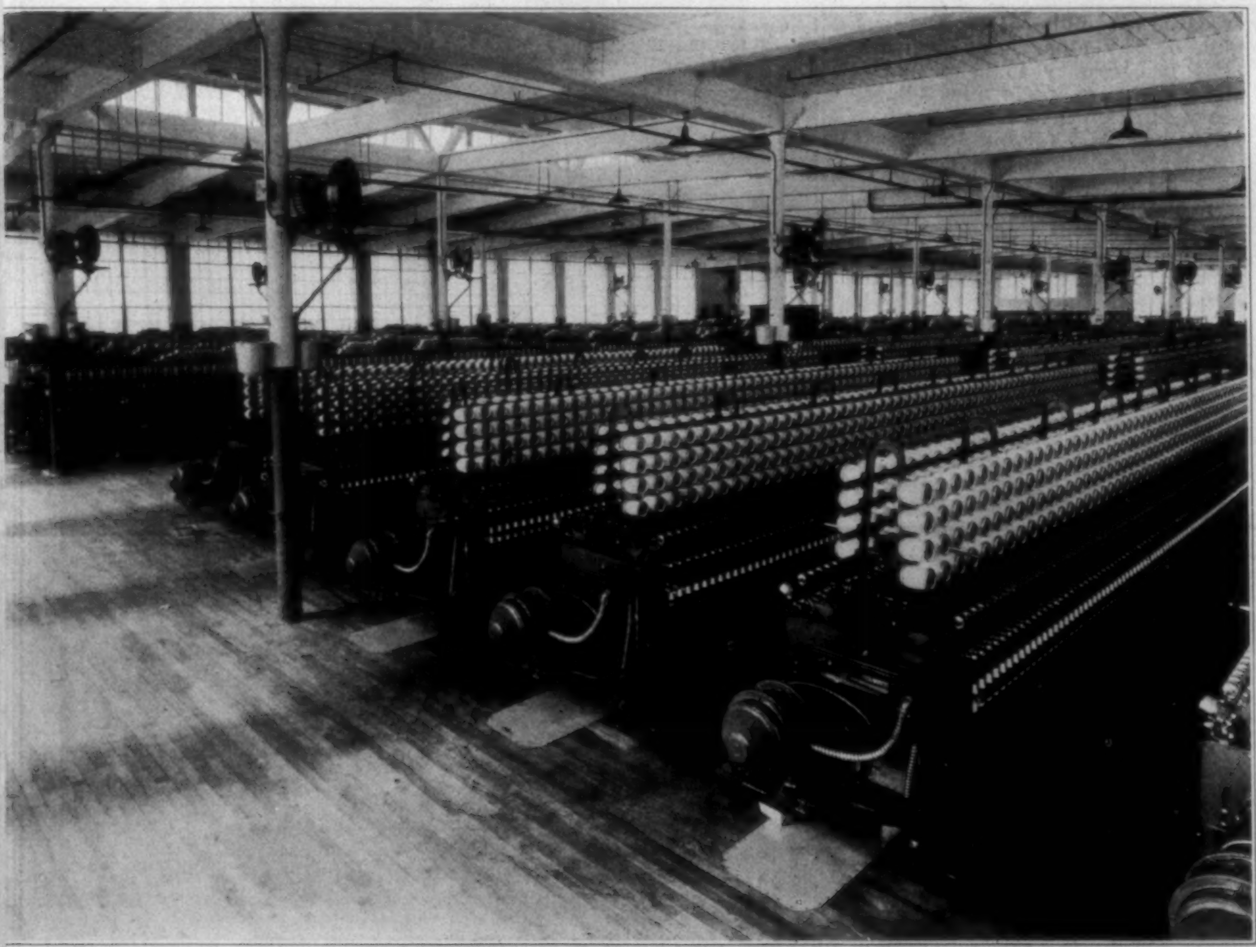
An installation of Bahnson Humidifiers in operation in the Fountain Cotton Mills, Tarboro, N. C. Whenever practicable Bahnson Humidifiers are mounted on columns. This method of mounting leaves the bays free from undesirable overhead drain piping, and gives a clean, neat appearance to the entire installation.

Perhaps at some time you have sent your pet advertising scheme to the printer to be made up in several different colors and when the finished product came back to you, it looked as though the colors were playing "Upset the Fruit Basket." Such a result is usually caused by different colors being run through the press under different atmospheric conditions which caused the paper to expand or contract according to the amount of humidity in the air, thereby throwing the colors out of line with each other. Bahnson humidifiers are now being installed in press and stock rooms of the paper industry so that this work may be carried on under the most favorable atmospheric conditions.

The Bahnson Company organization is devoted exclusively to the manufacture of a single type and size of humidifier. Motors used on the individual machine are furnished for practically any commercial electric supply. These motors are mechanically interchangeable, resulting in simplicity of design and interchangeability of parts.

Bahnson humidifiers are manufactured in Winston-Salem, N. C., under the supervision of the men who worked on the development of the first machine of this type.

(Continued on Page 29)



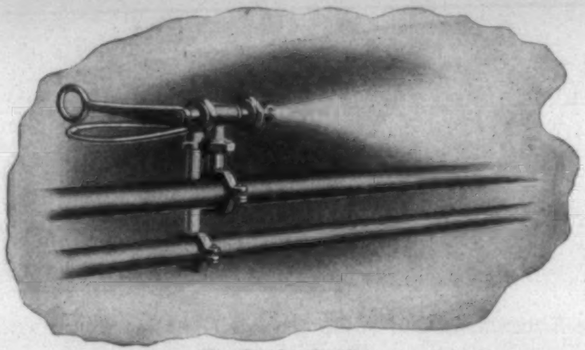
The installation pictured above shows how Bahnson Humidifiers are arranged so as to give perfect horizontal air circulation. Humidity escapes from any room chiefly through the walls and windows, and experience has shown that with proper horizontal circulation the center of the room always has sufficient humidity when the outer bays are properly supplied.

Parks-Cramer Company's Air Conditioning Devices

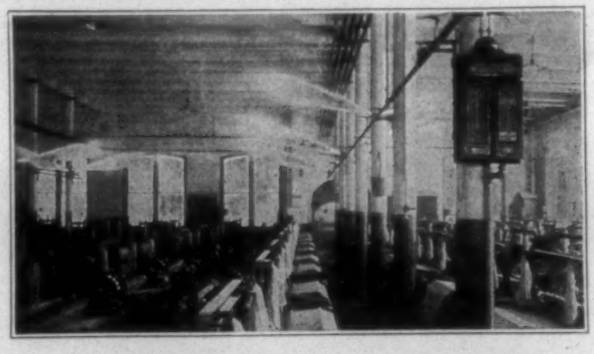
By a Representative of the Parks-Cramer Co.

AIR conditioning is a descriptive term applicable to any process for producing prescribed conditions temperature and humidity in factories and laboratories.

Most successful air conditioning devices in use today have been perfected during a period of rapid development in the last twenty years. Prior to this period only crude methods and devices were in use. Automatic regulation was unknown. The art had developed very slowly. Humidification had been practiced only as an expedient to mitigate the bad effects of severe weather. There had been no recognition of its value as an all-the-year-round aid to favorable manufacturing conditions.



Turbo in Action



Turbo Humidifiers—Line Construction

Air Cleaning

Research and general practice during the last few years, have led to recognition of the important influence of atmospheric moisture in facilitating manufacture and have created a commercial demand for adequate humidifying apparatus and regulating devices. This demand, in turn, has led to rapid development and improvement of such devices. Parks-Cramer take pardonable pride in that so many of the most prominent mills, both North and South, have adopted their devices, using them continuously.

It is plain that the actual evaportive capacity of an air conditinoing or a humidifying system depends upon:

(a) Uniformly fine quality of the spray.
(b) Effective distribution of spray, and
(c) Quantity of spray successfully delivered and actually evaporated under typical working conditions.

"BRETON"

MINEROL

For Plushes and Velvets

"It gives an oily sheen"

BORNE, SCRYMSER CO.
Established 1874
17 Battery Place, NEW YORK
BOSTON PHILADELPHIA
WORKS: BAYWAY, ELIZABETH, N. J.

The Answer to the Needs of a Hundred Industries

Mechanical and construction principles do not alone explain the selection of TOLHURSTS by the nation's leading industries — nor does actual performance during the past forty-five years explain, though it amply justifies the wisdom of their choice.

Preference is due to their being built by Extractor Specialists whose experience and ability are part of every machine. All factors instill confidence that TOLHURSTS will render the utmost in service.

Send for catalog illustrating Tolhurst Extractors

TOLHURST
REG. U.S. PAT. OFF.
CENTRIFUGAL
EXTRACTORS

Tolhurst Machine Works, Troy, N. Y.
Established 1852
New York Office: 111 Broadway

Hawk Starch

Superiorities

UNIFORMITY

STRENGTH

PURITY

ECONOMY

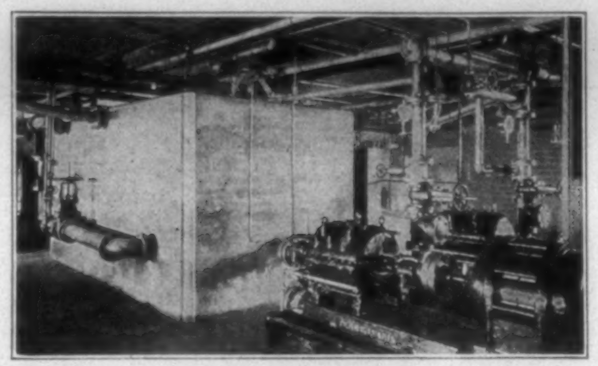
HAWK STARCH produces a strong, smooth warp of the right weight and pliability—the kind that weaves easily.

HAWK STARCH can be furnished in any desired viscosity. Just as your tailor "fits" the suit he makes for you, so do our experts adapt the starch to your local mill conditions.

STEIN, HALL & CO., INC.
61 BROADWAY, NEW YORK
Boston Charlotte, N. C. Chicago
Providence Troy Philadelphia

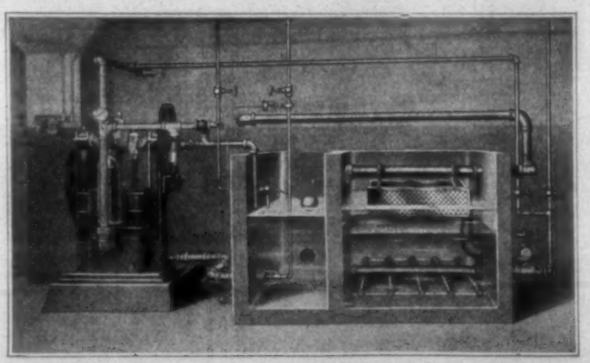
The ability of a humidifier to generate a large quality of spray is in fact of little value unless to it is joined the ability to distribute the spray so widely as to assure successful evaporaton.

Importance of fundamental principles. A clear understanding of the preceding principles will assist in recognizing the real advantages of reliable devices—and in detecting faults of unreliable devices. This will aid in making a wise selection of that particular device best suited for a special purpose. If a humidifier be tested in the open air, or in a large room otherwise unhumidified and having open windows, it may show a very high evaporative capacity. Tested under mill conditions and in the presense of high humidities, the same may prove unable to perform satisfactorily except at a greatly reduced capacity.



Concrete Filter Tank and Pump for Recirculating Spray Water to Humidifiers

The capacity of a device when new and in perfect condition is sure to suffer a certain loss after days, weeks, or months of continuous use, especially if not properly cared for.



Sectional View of Concrete Filter Tank

This loss in capacity will depend upon the conditions under which the device is operated. However, some types of humidifiers require more attention than others to produce equivalent results over long periods. The capacity of a particular device should be judged not only upon its performance when new and in first class condition, but upon the performance which it actually can show under every day factory conditions.

A humidfying system which combines liberal air washing functions with humidification is performing more service than a type which only humidifies. The system which is performing the greatest service should be entitled to a corresponding amount of attention.

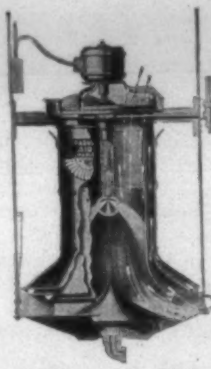
The Turbo humidifier is a well known and widely used type. The atomizer proper consists of only two parts which can be separated and reassembled without the use of any tool other than a wrench. The parts register in one position only so that all necessity for adjustment is avoid. The jet of spray has a slight rotation which ensures immediate separation of the particles of moisture, thus preventing any tendency toward precipitation. The spray issues form a single outlet in a flat surface so that deposits of lint cannot drip or interfere with operation.

Pneumatic cleaning, for cleaning motors and textile machinery, compressed air from the same compressor and pipe lines is available. While some extra compressor capacity is necessary, the additional expense is relatively slight. The popularity of atomizers systems is no doubt due in part to this convenient accessory.

Precautions should be taken to prevent waste of air by those using the cleaning devices. The use of only a few nozzles at a time should be permitted. Self-closing nozzles of limited size should be used. Hose, valves, and fitting should be kept in first class condition to avoid leakage. Carelessness will result in variations of air pressure which interfere with the performance of the humidifiers.

The high duty air conditioners originally developed by Staurt W. Cramer in 1911, have been successfully and widely used ever since. Water is supplied under high pressure (ordinarily about 150 pounds) through pipe lines from a centrally located pumping unit. Each air conditioner contains a spray generating nozzle of the impact type, located in a cylindrical casing. Below is a drainage pan to provide for the collection and return of unevaporated water which flows through a return pipe to a filter tank, from which it is recirculated.

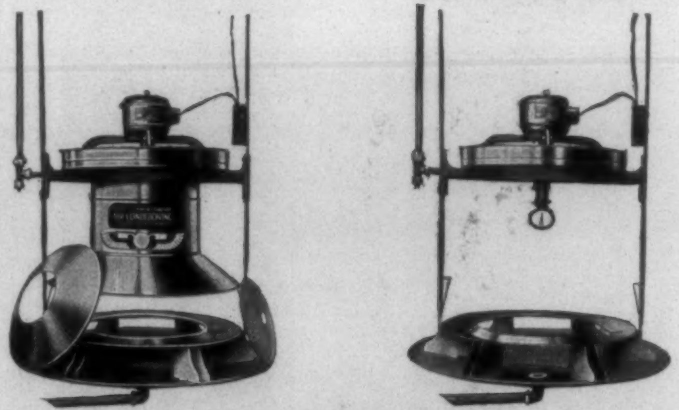
A fan mounted above propels a powerful air current through the humidifier. The quality of the spray is finer and the evaporative capacity is greater than that of any other type of humidifier suitable for local distribution.


Sectional View of High Duty Air Conditioner

Units of exceptionally high capacities are used where the requirements are most severe, as in spinning and twisting departments, and units of smaller capacities are installed in relatively large numbers when high humidities are required at moderate temperatures.

Upper casing lowered

Lower casing raised


High Duty Humidifier—showing accessibility for cleaning

The air is throughly cleaned during its passage through the humidifier by intimate mixture with the spray. Dust, lint, and bacterial atmospheric impurities are thus precipitated in the drainage pan, passing with the unevaporated water through the return piping to a centrally located tank. Here all foreign matter is removed by a gravel bed filter and accumulated impurities are rejected to waste and flushing. Fresh water to replace evaporation is constantly and automatically added to the purified return water, which is redistributed to the humidifiers by means of a circulating pump at the necesary pressure.

Parks-Cramer Air Conditioner

This is a most efficient type of air conditioner whether regarded from an engineering or commercial standpoint. Actual performance is the real measure of value and this type of air conditioner operates satisfactorily over long periods at lower cost for power and attendance, per gallon of water evaporated, than any other type.

The exceptional high evaporative capacity, high air washing capacity and strong cooling effect combine to make it especially desirable for sizeable installations.

Southern Railway System

Announces

Greatly Reduced Round Trip
Fares for Summer Season, 1924

Summer Excursion Fares

to Mountain and Seashore Resorts on sale daily May 15-Sept. 30. Final limit Oct. 31.

Sunday Excursion Fares

From Salisbury, Winston-Salem, Greensboro, Goldsboro, Danville and intermediate stations to Norfolk, Morehead City and Wilmington (Wrightsville Beach). Tickets on sale Saturday night and Sunday, limit Sunday night, season May 31-August 30, 1924.

Week-End Fares

To Western North Carolina Mountain Resorts and Seashore resorts of Eastern North Carolina and Virginia.

Tickets on sale Friday and Saturday. Limit following Tuesday. Season May 16 to August 30, 1924.

Special Excursion Fares

to Atlantic City and Niagara Falls on special dates during June, July and August.

We Recommend the Beautiful Mountains
of Western North Carolina
Out Door Sports Recreation Restful

Wonderful Boys' and Girls' Camps are Located in
Western North Carolina Mountains
Round Trip Fares for Special Occasions
Descriptive Literature Furnished on Application
For further detailed information call on any
Southern Railway Ticket Agent

CITY TICKET OFFICES

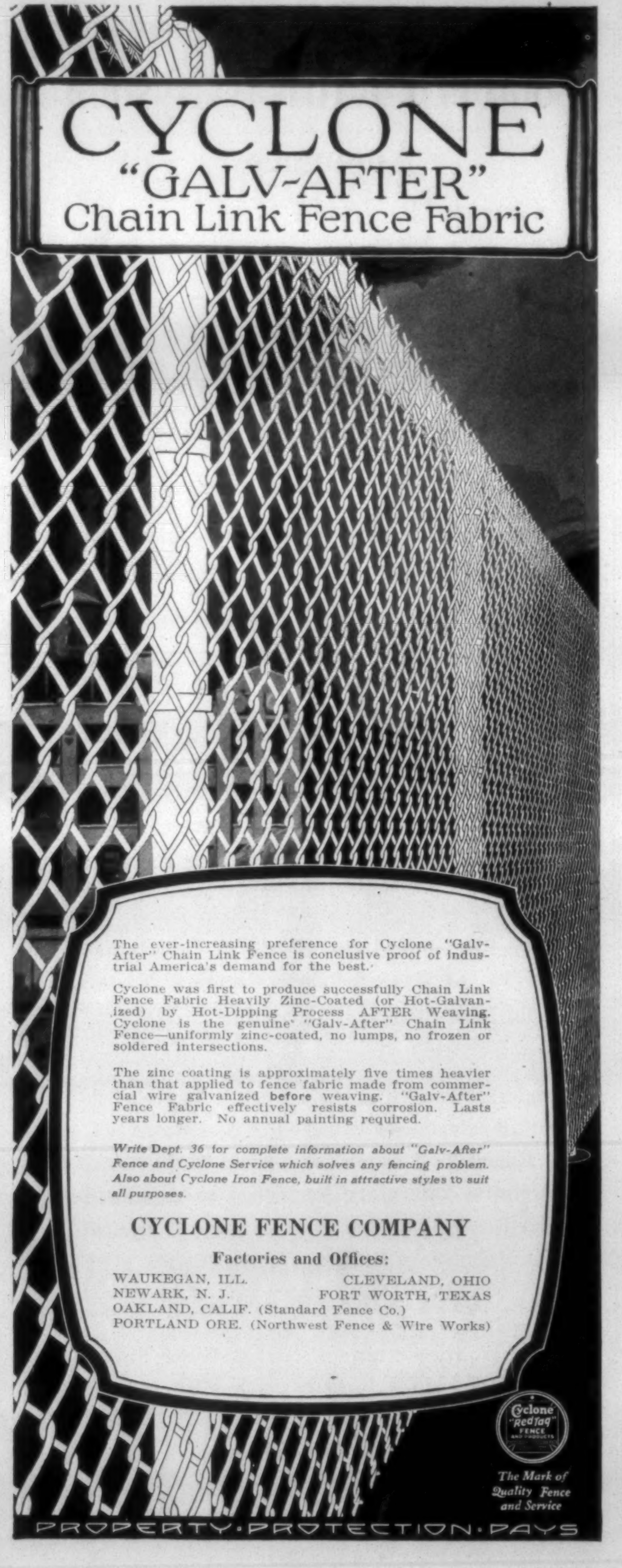
CHARLOTTE, N. C.
237 W. Trade Street

GREENSBORO, N. C.
112 E. Market Street

WINSTON-SALEM, N. C.
236 N. Main Street

RALEIGH, N. C.
326-27 Fayetteville Street

R. H. GRAHAM
Division Passenger Agent
Charlotte, N. C.



CYCLONE
"GALV-AFTER"
Chain Link Fence Fabric

The ever-increasing preference for Cyclone "Galv-After" Chain Link Fence is conclusive proof of industrial America's demand for the best.

Cyclone was first to produce successfully Chain Link Fence Fabric Heavily Zinc-Coated (or Hot-Galvanized) by Hot-Dipping Process AFTER Weaving. Cyclone is the genuine "Galv-After" Chain Link Fence—uniformly zinc-coated, no lumps, no frozen or soldered intersections.

The zinc coating is approximately five times heavier than that applied to fence fabric made from commercial wire galvanized **before** weaving. "Galv-After" Fence Fabric effectively resists corrosion. Lasts years longer. No annual painting required.

Write Dept. 36 for complete information about "Galv-After" Fence and Cyclone Service which solves any fencing problem. Also about Cyclone Iron Fence, built in attractive styles to suit all purposes.

CYCLONE FENCE COMPANY

Factories and Offices:

WAUKEGAN, ILL. CLEVELAND, OHIO
NEWARK, N. J. FORT WORTH, TEXAS
OAKLAND, CALIF. (Standard Fence Co.)
PORTLAND ORE. (Northwest Fence & Wire Works)

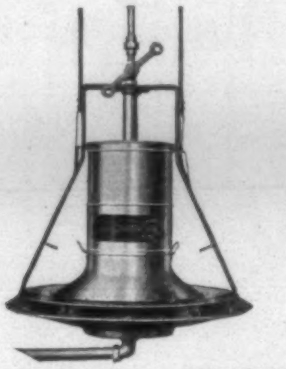
Cyclone "Red Tag" Fence and Products

The Mark of Quality Fence and Service

PROPERTY·PROTECTION·PAYS

In well equipped factories it is not unusual to find temperature 10 degrees or more below those outside especially on hot dry days.

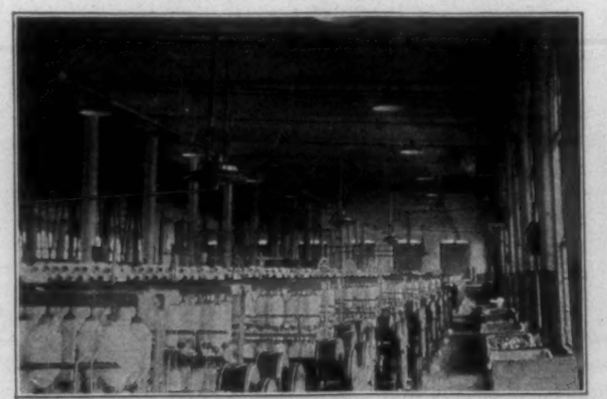
The so-called spray humidifier was the forerunner of the high duty type. It comprises an impact spray nozzle in a cylindrical casing with a drainage pan below. There is no fan to circulate the air as in the high duty type. The aspirating effect of the spray nozzle induces a moderate air current through the casing which distributes the entrained spray.


Parks-Cramer Spray Humidifier

This type of humidifier has been very successfully and widely used. It is less highly efficient than the high duty humidifier but both have many features of resemblance. The high duty is superseding its predecesssor because of its finer spray, better distribution, and greater capacity. The spray humidifier is less well adapted for producing the higher humidities which modern practice demands.

There has always existed a demand for a "self-contained" humidifier—one having the ability to generate and distribute spray without the use of air compressors, pumps, or other auxiliaries. A humidifier of such qualifications is naturally convenient for a small installation where few heads are required. The centrifugal type answers these requirements admirably.

The drainage water may run to waste if the system is small and the water supply ample and inexpensive. When the cost and quantity of the water require economy, the drainage water may be collected, filtered, and recirculated by means of a filter tank in which impurities may be removed. The purified return water may then be lifted by a centrifugal pump to a small reservoir for gravity supply to the humidifiers.


Centrifugal Humidifiers in Spinning Room

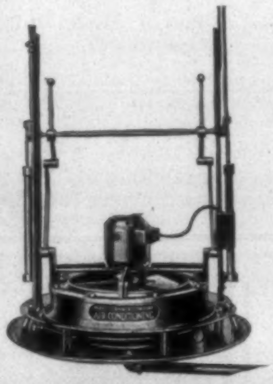
The central station type of apparatus combines the functions of ventilating, heating, air washing and humidifying in one large unit. Auiliary local units for heating or humidifying are sometimes necessary.

The equipment ordinarily incudes a centrally located humidifier with capacity sufficient to evaporate moisture at the maxium demand, a fan capable of changing the air in departments at the maximum rate desired, indirect central radiation, and suitable ducts and flues for conveying the conditioned air to all departments.

Humidity is maintained by a relative humidity regulator in the room, controlling either the heat supplied to the spray water, or the number of spray jets in operation —or both.

Temperature may be regulated by a room thermostat, controlling the main central heating coil.

Yarn Conditioning Apparatus. The conditioning of knitting yarns and sales yarns, especially for the knitting trade, is best accomplished in a room humidified by a small central station apparatus.


Parks-Cramer Centrifugal Humidifier

A relative humidity as high as 95 per cent and temperatures of from 90 degrees to 110 degrees are commonly used. The walls and ceiling of the enclosure in which the process is conducted must be protected by special heat-insulating construction to prevent condensation and drip.

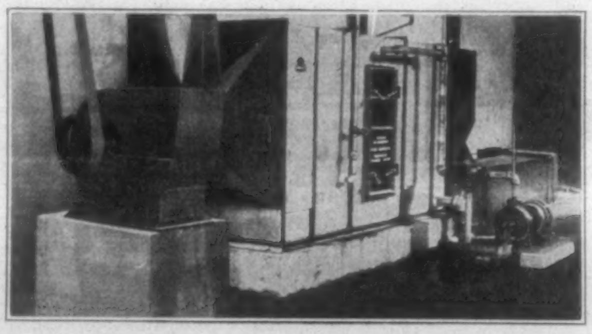
It is important that the delivery

and return ducts and openings should be so located as to ensure a thorough circulation of the conditioned air throughout the room.

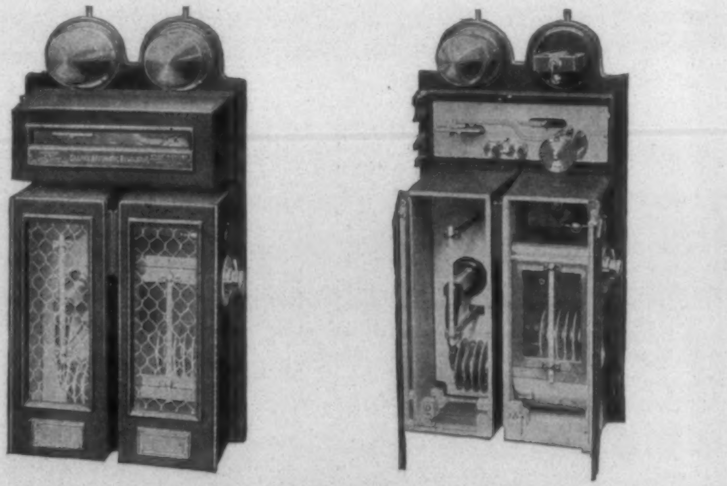
The humidifier is provided with a spray chamber and radiation coil. An automatic regulator located in the enclosure controls the humidity by regulating the amount of spray generated and controls the temperature by admission of heat to the coils. Thus a constant condition results.

Central Station System—Combining Humidification with High Ventilating Capacity

In 1916, Stuart W. Cramer, active in the textile industry both as an engineer and as a manufacturer, became convinced that variations in humidity affect production and quality. He conculded that important improvement could be secured if a way could be found to eliminate variable atmospheris conditions and stabilize the relative humidity by means of some sensative automatic device.



Humidifier for Conditioning Room



Psychrometric Humidity and Temperature Regulator

The first instruments were introduced to the textile industry in 1907. Progressive textile manufacturers at once began to adopt them and the art of industrial humidification immediately entered upon a period of rapid improvement and developement. Mumidity regulators have since been progressively improved and are now widely used but there is still some misconception as to their possibilities. The importance of the economics which are secured by their use is much greater than is generally realized.

The modern psychrometric humidity regulator, or psychrostat, the most advanced type now in common use, is illustrated below. The external appearance of the regulator and its cover removed are shown.

Psychrometric regulators are built exclusively of inorganic materials whose quailties are permanent. The expansible elements

(Continued on Page 29)

Smooth receptacles give double protection

Worker's hands are safe from injury,---materials in process are not torn or broken in mills where smooth receptacles are used

Smoothness and durability are the most important qualities in trucks, roving cans and other mill receptacles. Equipment that is properly constructed of long wearing material will more than pay for itself in saving of time, material and upkeep.

Diamond Fibre Receptacles are made smooth and remain smooth under hard usage. They outlast receptacles made of wood and other substitute material. They practically eliminate upkeep cost.

Diamond Fibre Receptacles are made of a hard, steel-smooth, durable material. Inside and outside the material is flawlessly smooth. There are no rough spots on which the fibres of the sliver can catch and break.

Diamond Fibre Receptacles are light, tough, resilient. They do not scuff, crack, splinter or corrode. The bumps and blows of everyday use do not weaken or injure them.

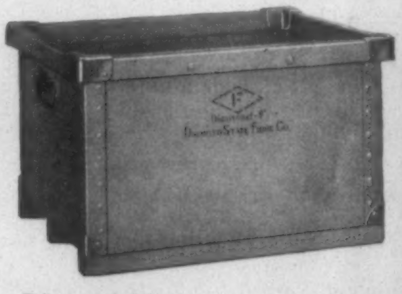
Now that business is slack, look into this method of cutting operating costs. some mills have cut their maintainance force in half since installing Diamond Fibre receptacles.

Write for booklet, "Diamond Fibre Receptacles."

Diamond Fibre Barrel With Cover

Diamond Fibre Tapered Mill Baskets

Diamond Fibre Doffing Car



Diamond Fibre Compound Box

Diamond State Fibre Co.
Bridgeport, Pennsylvania
Offices in Principal Cities
Toronto, Canada—London, England

SOUTHERN
TEXTILE BULLETIN
Member of Audit Bureau of Circulations
Member of Associated Business Papers, Inc.

Published Every Thursday by
CLARK PUBLISHING COMPANY
Offices: 39-41 S. Church St., Charlotte, N. C.

THURSDAY, AUGUST 7, 1924

DAVID CLARK	Managing Editor
D. H. HILL, JR.	Associate Editor
JUNIUS M. SMITH	Business Manager

SUBSCRIPTION

One year, payable in advance	$2.00
Other Countries in Postal Union	4.00
Single Copies	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

ADVERTISING

Advertising rates furnished upon application.
Address all communications and make all drafts, checks and money orders payable to Clark Publishing Company, Charlotte, N. C.

The Value of Humidity

OUR "Better Equipment Campaign" is this week considering the most important but frequently misunderstood subject of humidity.

The Bahnson Company, Carrier Engineering Company and the Parks-Cramer Company are each describing their system and there is also a very instructive discussion of humidity and air conditioning by W. B. Hodge, who is generally rated as one of the best informed men in this country upon this subject.

Cotton in its natural state contains moisture and the heat of the machines through which it passes in the course of manufacture into yarn and cloth drives out the natural moisture.

In its dried state it does not spin and weave as well and has less weight.

Why not by proper humidification and air conditioning have better running work and save the large loss due to the natural moisture drying out of cotton?

The salaries of many of the managers who operate mills without proper moisture are small in comparison to the losses that the mills sustain through the lack of moisture.

The articles on humidity and air conditioning in this issue are worth studying.

Federal Labor Amendment

ON account of the fact that the enemy are continually watching the columns of the Southern Textile Bulletin we can not tell all we know about the progress of the Federal Labor Amendment, which has now been voted down by two States and ratified by one.

We will say, however, that the campaign of falsehoods and misrepresentations that was conducted by the Children's Bureau of the Department of Labor and the National Child Labor Committee last winter and which assisted them in passing the resolution through Congress has now produced a great reaction.

Since the matter has been presented for individual action by the States the people of each State have been presented with the proposition of passing legislation to eliminate child labor, not within their own borders but in some other State, and thinking men and women have begun to wonder what States allow child labor.

As they learned that other States were in the same predicament as themselves they have begun to investigate and as they have learned the truth an intense reaction has set in.

Nothing has helped more than their sob story about "More Than a Million Little Children in Gainful Occupation."

While they were trying to tell the farmers that they did not intend to pass any legislation affecting them, the farmers have discovered that the "More Than a Million Little Children" were almost entirely farm children and they have seen the unfairness of using farm workers as a weapon if there is no intention of including the farm children in the proposed legislation.

Collier's Weekly, upon realizing that the trickery of those figures had been uncovered, boldly declares that farm labor is the most cruel of all child labor.

The agitators attacked Georgia for refusing to ratify the amendment and gave as the Georgia motive the desire to employ little children.

Then the public learned through us and other writers that only 127 children under 14 years of age were employed in Georgia and that the cotton manufacturers of that State had protested against their employment.

Where is the child labor that requires a Federal amendment, asks the public, and every time they investigate they find that false statements and misrepresentations have been made.

Every State denies child labor and finds that lies have been told in other States about its own child labor, and with every exposure there comes a reaction against legislating to remove something that does not exist.

In their desperation they are turning to the villification of those who oppose the transfer of the powers of the several States to an old maids bureau at Washington and the editor of this journal is the frequent subject of their attacks.

They went too far with their misrepresentations and as the people of the several States are beginning to realize that the depicted conditions do not exist they will express their resentment.

The proposed Federal Labor Amendment will not be ratified.

Geo. Otis Draper Answers Colliers

July 31,1923.

Collier's Magazine,
New York City,

Gentlemen:

In a recent issue, an article on child labor, these words met my eye: "The weaver beside me as I stood watching the shuttle shooting back and forth was a kid in short pants. He was litttle. He seemed dull. He was very busy."

As a matter of fact, weavers are almost universally full grown men and women. I will not claim that there is not one boy weaving in some mill, but why single out an exception to prove a case? It reminds me of Mrs. Van Vorst when she wrote of children "cleaning saliva from the frames," when few of her readers knew that she meant "sliver," a soft rope of cotton. She also spoke of the long lines of little children going to work with their dinner pails, not knowing that they were school-children bringing lunch to their parents at the noon hour.

With many States forbidding employment under sixteen years and others already committed to eighteen, I rise to inquire what shall be done with fifty per cent of morons who cannot assimilate education above the grammar grade? In many communities the high schools could not include more than one-eighth of the grammar-school graduates and many leave grammar school below the age of thirteen. If we must have millions of children out of school between the ages of thirteen and sixteen, (now proposed to be raised to eighteen), is it better to have them run in the streets or learning some useful employment? In many sections of the country women must labor to meet family expenses. Are you going to let a hulking full-grown boy be idle while his mother runs looms? In several States the idle youths have shown mob degeneracy that it has been necessary to close pool-rooms in order to deny them a meeting-place. Students of statistics know that since child-labor laws came in laborers have ceased to have so many children. Will the reformers shoulder the responsibility for the variuos ill-chosen measures which have been adopted to bring on this result?

My family has been connected with the weaving industry in this country since 1816. I have no personal profit from child-labor since looms are not run by children. I know from my own observation that this country suffers for lack of skilled workmen and skill is product of early adaptation. Some of our misguided sentimentallsts think that grown youths want to play all the time. A great majority in days past, however, took active interest in honest labor and were gratified at earning the accompanying wages. The spectacle of boys with growing beards begging their mothers for money to go to the movies, is rather unseemly in comparison.

Yours Sincerely,
GEORGE OTIS DRAPER
Vice-President.
Hopedale Mfg. Co., Hopedale, Mass.

Some Experiment

WE note the following in one of the Fall River papers:

> "The transfer of Iron Works Mills, Nos. 6 and 7, of the cotton manufacturing division of the American Printing Company will be largely in the nature of an experiment, to determine whether the oft-repeated assertion that cotton cloth can be manufactured and marketed in the South to better advantage than in the North, is propaganda or fact.

We rise to remark that the transfer of 100,000 spindles to Kingsport, Tenn., is some little experiment.

We wonder how many spindles they would have to transfer to make the movement more than an experiment.

Passing of Dr. D. H. Hill

WE wish to pay a tribute to Dr. D. H. Hill, who died last Thursday at Blowing Rock, N. C., not because of the fact that he was the father of our associate editor, but for the position that he occupied and the life that he lived.

Many years ago when the editor of this journal entered the North Carolina State College, Dr. Hill was professor of English and later became president of that institution.

Of all the professors and instructors in that institution, Dr. Hill was the most liked and the most highly regarded by the student body.

A man of kindly and friendly disposition, he had the rare ability to mix freely with the students and yet hold their admiration and respect.

He resigned as president of State College in order to compile a History of North Carolina's part in the Civil War, and it will always be regretted that he was not spared to complete his work. One of the most beloved men in North Carolina has passed and the South has lost one of its greatest educators and historians.

Personal News

C. K. Quick has resigned as superintendent of the Raeford Cotton Mills, Raeford, N. C.

W. H. Still has resigned as overseer carding at the Hannah-Pickett Mills, Rockingham, N. C.

H. F. Jones, president and manager of the Echota Cotton Mills, Calhoun, Ga., is on a business trip to New York.

Calvin Ousley has resigned as night overseer spinning at the Harmony Grove Mills, Commerce, Ga.

D. P. Damon has been appointed night overseer spinning at the Harmony Grove Mills, Commerce, Ga.

Martin Stanfield has resigned as overseer twisting at the Elk Mills, Dalton, Ga.

W. D. McCombs has become overseer carding and spinning at the Athens Manufacturing Company, Athens, Ga.

Henry G. Cleghorn has become overseer of spinning at the Prendergast Cotton Mills, Prendergast, Tenn.

J. M. Hale has been promoted from overseer of spinning to superintendent of the Calhoun (Ga.) Yarn Mills.

F. Lee Gravitt, of Williamtic, Conn., will be general manager of American Thread Mills, now under construction at Dalton, Ga.

W. A. Erwin, Jr., manager of the Erwin Mills, Duke, N. C., has sailed for England to attend the International Exposition.

M. L. Picklesimer has resigned as night overseer carding at the Hannah-Pickett Mills, Rockingham, N. C., to become superintendent of the Raeford Cotton Mills, Raeford, N. C.

J. R. Dover, the Mill Man

(Cleveland Star)

J. R. Dover, president of the Dover and Eastside cotton mills, is one of the most outstanding cotton mill men in the South, and Shelby is proud of him because he is a home product, born and reared on the farms of Cleveland, and in whose ability the people of Cleveland have the utmost confidence.

It is not often that one sees the farmers have such confidence in a mill man to invest their savings in a cotton mill, but we are not far wrong when we say that the majority of the shareholders in the Dover and Eastside mills are farmers of Cleveland county.

When Mr. Dover took charge of the Eastside mill it was on the rocks because of the 1921 depression. Stockholders were about to lose nearly $400,000, but thanks to the management of Mr Dover and his co-workers F. R. Morgan, Lee Packard and Earl Hamrick, the common stock has climbed from 35 cents on the dollar to par and last week the Eastside mill retired $100,000 worth of eight per cent perferred stock. The Star referred to this retirement last week but inadvertently said it was the Dover rather than the Eastside mill. Through all this depression, both mills have run continuously. Perhaps they made money, but Mr. Dover's feeling for his employees and their necessity of drawing a weekly pay envelope, impelled him to continue turning the spindles in the face of hard times and in spite of the fact that mills most everywhere were curtailing.

Charlotte Harness & Reed Co.

The Charlotte Harness & Reed Co. has been incorporated with a capital stock of $25,000 by J. S. Cromer and B. B. Thompson, both of Charlotte, N. C. It is understood that the company plans to manufacture loom reeds and harness.

Carry-Over of American Cotton 2,319,000 Bales.

New Orleans, Aug. 1.—The carry-over of American cotton into the new season beginning today was 254,000 bales less than last year, H. G. Hester, secretary of the New Orleans Cotton Exchange, announced in his annual report.

The carry-over was 2,319,000 bales, compared with 2,573,000 the previous year.

The world's consumption of American cotton during the year was placed at 11,242,000 bales as against 12,631,000 last year.

The commercial crop grown in this country was estimated at 11,290,397 as compared with 11,282,806.

Textile Bands Will Hold Meet.

Abbeville, S. C.—The Carolina Textile Band Association will meet in Abbeville September 6. Hatch's Concert Band, assisted by the city of Abbeville, will entertain the association, which is composed of the following:

Graniteville Concert Band, Graniteville, T. E. Friday, director; Glenn-Lowry Concert Band, Whitmire, H. G. Adams, secretary; Gossett Concert Band, Williamston, J. S. Pruitt, director; Jordan Concert Band, Greenwood, J. C. Darby, director; Mollohon Concert Band, Newberry, W. H. Callas, director; Oakland Concert Band, Newberry, O. O. Reighley, manager; Newberry Concert Band, Newberry, W. H. Hardeman, manager; Calhoun Falls Concert Band, Calhoun Falls, Truman Ellison, secretary; Saxon W. O. W. Concert Band, Spartanburg, S. J. Bishop, manager; Watt's Mill Concert Band, Laurens, C. G. Jones, secretary, and Hatch's Concert Band, Abbeville, A. K. Patterson, director.

Bobbins and Spools

Particular attention given to

All Types Of Warp Bobbins For Filling Wind

Samples of such bobbins gladly furnished

The Dana S. Courtney Co.
Chicopee, Mass.
A. B. CARTER, Southern Agt, Gastonia, N. C.

Nickle Plated Drop Wires

Others manufacture copper-plate drop wires. So do we, when a mill prefers that finish, but it is an axiomatic chemical fact that the acids formed by sizing compounds and starches, plus the moisture from the humidifiers, which so freely corrode the copper itself, cannot and will not corrode the nickel.

Many mills are thus escaping steel rust and copper corrosion by using our nickel-plated drop wires.

STEEL HEDDLE MFG. CO.

GREENVILLE PHILADELPHIA PROVIDENCE

"Duplex" Loom Harness—complete Frames and Heddles fully assembled
Selvage Harness
Leno Doups
Harness Frames
Jacquard Heddles

SOUTHERN PLANT
Greenville, S. C.
HAMPTON SMITH
Southern Manager

Drop Wires
Nickel-Plated
Copper-Plated
Plain Finish
Improved Loom Reeds
Leno Reeds
Lease Reeds
Combs

MILL NEWS ITEMS OF INTEREST

Reidsville, N. C.—The Edna Mills have returned to full time operations.

Gastonia, N. C.—The Rex Spinning Co., has resumed full time operations after curtailing for some weeks.

Lexington, N. C.—Local mills which have been operating four days a week for some weeks have increased to five days per week.

Shelby, N. C.—The Dover Mills are planning the installation of 55 automatic looms.

Danville, Va.—The Danville Knitting Mills have installed Bahnson humidifiers in their knitting department.

Covington, Ky.—The R. T. Pearce Company, manufacturers of narrow woven fabrics, are contemplating installation of a small bleaching plant.

Madrid, Ala.—The Madrid Cotton Mill Company suffered about $5,000 damage by fire which originated in the picker room recently.

Hemp, N. C.—County Moore Mills, Inc., are nearing completion and work is progressing rapidly . They have just closed humidifying contract with The Bahnson Coompany. Winston-Salem, N. C. Lockwood, Greene & Co., Engineers.

Mount Pleasant, N. C.—The Tuscarora Cotton Mill has awarded humidifying contract for a complete installation of their mill to The Bahnson Co., Winston-Salem, N. C. This installation is to take place of an old system now in the mill.

Bethune, S. C.—Plans for the construction of a cotton mill here have received the endorsement of a large number of citizens who recently gathered at a mass meeting . A finance committeee was appointed to arrange for the erection and financing of the project.

Spartanburg, S. C.—The Valley Falls Mill of the Martel Mills, Inc., is planning to erect a three-story, 300x75 foot addition to its plant. It is said that when this new structure is completed, the spindles will be increased to 20,000, and looms to 750.

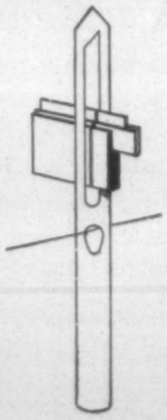
Johnson City, Tenn.—Contract for the building of the Gloria Textile Co., was let last Saturday to the Peeler Construction Co., of this place. The contract included building and plumbing. The building will have 45,000 square feet of floor space.

Contract for the automatic sprinklers was let to the Globe Automatic Sprinkler Co.

THE FARISH COMPANY
COMMISSION MERCHANTS
100 WORTH STREET
NEW YORK

KNOXALL ROLLER CLOTH
(Virgin Wool)
Edward H. Best & Company
222 Purchase St.
Boston, Mass.

ECONOMY COAL
STEAM and DOMESTIC COALS
FROM OUR OWN MINES
New River and Pocahontas
High Volatile Splint and Gas
Sugar Creek Coal Sales Company
Richmond, Va. Mt. Hope, W. Va.



K-A Electrical Warp Stop
For Looms
is backed by twenty years of experience and steady growth. It is adopted by representative mills weaving cotton, silk, worsted and woolens.
R. I. Warp Stop Equipment Co.
CHARLOTTE ATLANTA PAWTUCKET

Members American Society Landscape Architects
E. S. DRAPER
11 E. Fifth St.
CHARLOTTE, N. C.
101 Marietta Bldg.
ATLANTA, GA.
LANDSCAPE ARCHITECT and ENGINEER
Town Planning and Mill Village Developments
Parks, Real Estate Subdivisions and Cemeteries
Resort Hotels and Country Clubs
Private Estates and Home Grounds
Complete Topographic Surveys
General Designs, Planting, Grading and Detail Plans
Supervision of Landscape and Engineering Construction
Sewer and Water Development
Largest Landscape Organization in the South

Victoria, Tex.—E. C. Goldman, C. L. Grunder and associates are planning to establish a cotton mill.

Fitzgerald, Ga. — The Fitzgerald Cotton Mills have purchased the Henry Cotton Mills of Hawkinsville which makes a total of three mills owned by this company. The mill at Hawkinville will be remodeled at once. The Fitzgerald Mills manufacture ducks, drills sheetings and fancies.

Wilson, N. C.—The local Chamber of Commerce, of which M. R. Beamon is secretary, is negotiating with G. Lester Wilcox, assistant superintendent of the Granite Mills of Fall River, Mass., who with associates is planning to build a $500,000 cotton mill in North Carolina.

Union, S. C.—Authority to increase the capital stock of the Excelsior Mills, from $500,000 to $800,00 was granted by the Secretary of State.

Emislie Nicholson is president of the milling company, and W. S. Nicholson is treasurer. The directors are Emisle Nicholson, R. P. Harry and W. S. Nicholson.

Laurinburg, N. C.—Stockholders of Laurinburg's four cotton mills, the Dickson, Waverly, Scotland and Prince, held their meetings here last week. Reports of officials indicated a good year's work. The mills have been running on part time for several weeks but confidence was expressed that they would go back on full time in a short while.

High Shoals, N. C.—Work began here recently on the Manville-Jenckes Company store, which is to be remodeled. Owing to the fact that the new mill will come nearly up to the front of the store, the entrance is having to be changed, making the front entrance where the back is now. There will also be a side entrance on the west side of the store. The stairs are being moved to the back and the post-office will also probably have to be moved. There will be a complete reversal of fixtures on the inside.

Fayetteville, N. C.—For the purpose of manufacturing automobile and furniture upholstery, the Cotton Products Company, recently chartered by the Secretary of State, has been organized by the election of officers and directors and has leased here, in which operations will begin at an early date. It was stated that machinery has been ordered from Philadelphia and that warehouses for storing of the product will be built.

The officers of the company are Col. Terry A. Lyon, of Washington, D. C., president; S. W. Cooper, of this city, former president of the National Bank of Fayetteville, vice-president; W. M. Walker, clerk of the Superior Court of Cumberland county, secretary and treasurer, and W. D. McNiell, general manager.

The new company will utilize the waste from cotton mills in manufacturing products that are declared to be salable in every part of the union. North Carolina furniture factories are expected to take a large part of the output and it was said that the General Motors Corporation is a prospective customer of the local manufactory. North Carolina manufacturers are now buying this product, it is stated, from mills as far away as Oakland, Cal., paying freight on the material both ways.

Orange, Cal.—The West Coast Textile Company is moving its plant from Redlands to this city. The company has been in operation at Redlands for the last year and a half where they have manufactured the "Thistle" brand Turkish towels and bath robes. The concern, which is capitalized for $250,000, is headed by Mrs. A. M. Hope, who was the organizer, 20 years ago, of the Modart Corset Company at Saginaw, Mich.

San Marcos. Tex.—The San Marcos Chamber of Commerce is authorized to announce that officials of the Planters and Manufacturers Cotton Mills has made the purchase of a plant site for the new mill to be erected at San Marcos. It is a tract of 34.13 acres, bought from J. W. Gary.

This tract of land is located one and one-half miles north of San Marcos on the San Antonio- Austin highway, and between the M. K. & T. and I. G. N. railroads. Ample water supply is furnished by springs located but a few hundred feet from the site.

This mill will have 10,000 spindles, about 350 looms, and will manufacture high grade outing flannels.

Kingsport, Tenn.,—The new mill to be constructed here, as noted, is to be known as Mill No. 1 of Borden Mills, Inc. Borden Mils, Inc., is to be organized under the laws of Massachusetts for the purpose of constructing and owning the new mill and acquiring about 88,000 spindles, approximately 1,940 wide Draper automatic looms and necessary supplementary machinery from the American Printing Co., of Fall River, which will own all its capital stock, except directors' shares.

These facts are contained in a letter from Bertram H. Borden, president of the American Printing Co., and are used by Blair & Co., and Hayden, Stone & Co., in their advertisement.

"These bonds will be secured, in the opinion of counsel, by a closed first mortgage on all real estate, every description of Borden Mills, buildings and fixed property of Incorporated, comprised in said Mill No. 1 at Kingsport, Tenn., and all additions betterments and improvements thereto.

"The real estate and comtemplated construction in Kingsport, and the machinery and equipment of Borden Mills, Incorporated, when installed therein, have been conservatively valued by Charles T. Main of Boston, an independent engineer, as having a sound value, i. e., replacement cost less depreciation, of not less than $3,200,000.

Boll Weevil Reports.

Florence, S. C.—Boll weevil infestation in Florence County is increasing at a rapid rate, according to J. Ward McLendon, Florence County agent. Certain farms have reported infestation as high as 40 and 60 per cent, he said. Wet weather during the past few weeks failed, he stated, to put a stop to weevil activities.

* * *

Spartanburg, S. C.—The boll weevil infestation in Spartanburg County has increased in the last few days in alarming proportions, Ernest Carnes, county agricultural agent, states. Mr. Carnes states that he has talked with several farmers from all sections of the county and they report the weevils are fairly alive in their fields.

LOOM STRAPPING
Check Straps-- Hold-ups--
Lugs, Binder Straps--
folded and stitched, cemented—
Rounded and flat
Harness Straps-- Power Straps--
Bumpers-- Friction Discs--
We specialize and know your looms.
Ask your jobber.
The Druid Oak Belting Co., Inc.
Baltimore——Boston

UNIFORM IN APPLICATION
Victrolyn
A dependable assistant in sizing Cotton Warps
SOLE MANUFACTURERS
Bosson & Lane
Works and Office , Atlantic, Mass.

EMMONS LOOM HARNESS COMPANY
The Largest Manufacturers of Loom Harness and Reeds in America
Loom Harness and Reeds
Slasher and Striking Combs, Warps and Leice Reeds,
Beamer and Dresser Hecks, Mending Eyes, Jacquard Heddles
LAWRENCE, MASS.

DARY TRAVELERS
If it's a DARY Ring Traveler, you can depend on it that the high quality is guaranteed—that the weight and circle is always correct and that all are uniformly tempered which insures even running, spinning or twisting.
Ask for prices
DARY RING TRAVELER COMPANY
311 Somerset Ave. Fred H. Dary, Mgr. Taunton, Mass.
JOHN E. HUMPHRIES —Sou. Agents— CHAS. L. ASHLEY
Greenville, S. C. Atlanta, Ga.

Joseph L. Davidson Co.
Established 1889
Designing Card Stamping Repeating
FOR ALL TEXTILE FABRICS
2525 N. Second St., Philadelphia, Pa.

"ATLANTA"
HARNESS
"Quality and Service
That Satisfies"
ATLANTA HARNESS
& REED MFG. CO.
ATLANTA, GA.
P. O. Box 1375
Telephone Main 0517

THE CHOICE OF A HUMIDIFYING SYSTEM
must be one that for simplicity with great capacity and economy in maintenance produces uniformly such conditions that may be determined for the different requirements of the work. In the American Moistening Company's method of humidifying, all such requirements are GUARANTEED
Our COMINS SECTIONAL HUMIDIFIERS
Our FAN TYPE and HIGH DUTY HUMIDIFIERS
Our VENTILATING Type of Humidifier (Taking fresh air into the room from outside)
Our ATOMIZERS or COMPRESSED AIR SYSTEM
Our COMPRESSED AIR CLEANING SYSTEM
Our CONDITIONING ROOM EQUIPMENT
Our AUTOMATIC HUMIDITY CONTROL (Can be applied to systems already installed)
Our AUTOMATIC TEMPERATURE CONTROL
Are all STANDARDS OF MODERN TEXTILE MILL EQUIPMENTS
AMERICAN MOISTENING COMPANY
RUSSELL GRINNELL, President BOSTON, MASS. FRANK B. COMINS, General Manager
SOUTHERN OFFICES, 276 Marietta St., Atlanta, Ga., No. Charlotte, N. C.

THE ARABOL MANUFACTURING CO.

OFFICES:
110 East 42nd St.
(New Bowery Savings Bank Building)
New York City

EXPORTERS—MANUFACTURERS—IMPORTERS

of any kind of Preparations for

SIZING SOFTENING FINISHING WEIGHTING

for all Textile Purposes

WORKS:
Brooklyn, N. Y.
Cicero, Ill.
Brampton, Ont.

Sizing Preparations, Tallows, Filling Materials, Printing and Stiffening Gums, Rosin Soaps, Dextrines, Soluble Oils, 50%-75% Guaranteed

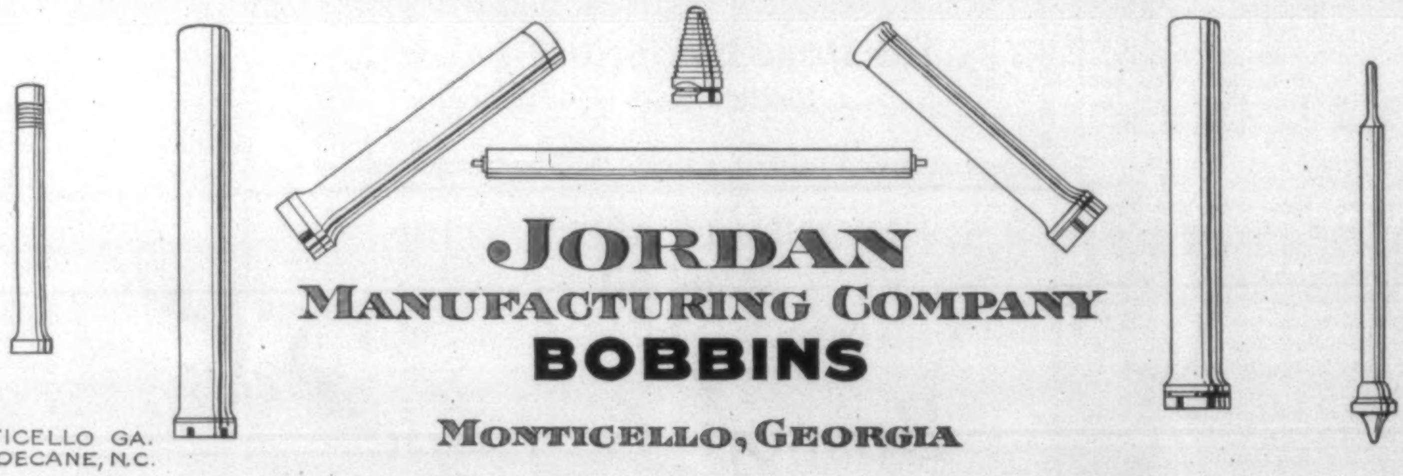
Boil-Off Oil **Degumming Oil** **Hosiery Oil**

Many years' practical experience of our technical staff enables us to meet all your requirements. Our Textile Research Laboratories are at your disposal. Your correspondence and trial orders are solicited.

ARABOL
Reg. U. S. Pat. Off.

Southern Agent: Cameron McRae, Concord, N. C.

P. D. JOHNSON, Georgia Representative, Atlanta, Ga. HERBERT BOOTH, Tenn.-Ala. Representative, Chattanooga, Tenn.



JORDAN MANUFACTURING COMPANY BOBBINS

MONTICELLO, GEORGIA

MILLS AT
MONTICELLO GA.
AND TOECANE, N.C.

SCOTT TESTERS

The Standard of The World For Tests of Fabrics, Yarns, Twines, Etc.

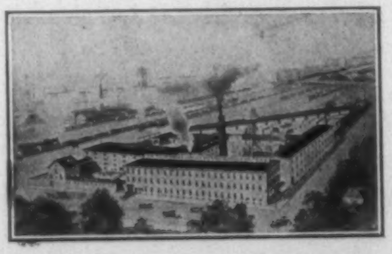
HENRY L. SCOTT & CO. *Catalog on Request* **PROVIDENCE, R. I.**

Manufacturers of Speeders, Skewers, Warp Bobbins, Filling Bobbins, Cap Spinning Bobbins, Northrop Loom Bobbins, Twister Bobbins, Twister Spools, Warper Spools, Comber Rolls, Quills, Underclearer Rolls (plain or covered).

U S Bobbin & Shuttle Co.
57 EDDY STREET
PROVIDENCE, R. I.

SHUTTLES

We make a specialty of Shuttles for all makes of looms, both plain and automatic. Correspondence solicited.



DAVID M. BROWN
President

GEORGE G. BROWN
Treasurer

THE DAVID BROWN COMPANY
Lawrence, Mass.

All Our Products Made in One Up-to-the-Minute Factory Group

"HIGH GRADE"
Bobbins, Spools and Shuttles

Correspondence Solicited Catalog on Request

Number Twenty-five

(Continued from Page 16)

ning of the work at different processes, avoids possibility of heavy losses as shown later, eliminates worry and loss of time of executives, enhances the salability of goods, reduces waste and seconds.

Equipment, however, must always be purchased after a thorough study of advantages to be gained, and the cost to be incurred, Each dollar, indeed, invested in a plant must earn 16 per cent, that is; six per cent for depreciation and obsolescences, six per cent for interest, and four per cent taxes and insurance. The present prices of textile machinery are twice as high now as they were ten years ago, so the per spindle cost of machinery alone for a 50,000 spindle yarn mill making 16's carded hosiery yarn was estimated at $9.93 in 1911, and $21.38 in 1922. A mill, therefore, built in 1922 would have fixed charges on the total plant investment, estimating 16 per cent of $362,000, while a plant built in 1911 has a corresponding item of $196,000.

The question can be asked ,where are the mills to secure the money for such high priced equipment? Sound management always provides adequate reserves for this purpose. It is understood that every bale of goods sold has an element for the equipment wearing out and becoming useless. Well managed mills, therefore, consider depreciation and obsolescence one of the important items of operating costs, so we find 5 yard print cloth with a total cost 19 cents a pound, charges about ten per cent of it, or 2 cents, for depreciation. That is a cost greater than the cost of its spinning department. There are mills however, that do not possess liquid reserves for replacement of equipment, if they are able to secure the needed money by issuing stock or borrowing it.

One can find many Picker rooms with worn-out equipment. The machinery, indeed, is heavy and runs at great speed. If not properly taken care of, it is subject to vibration, wear in every bearing, and finally becomes practically useless Such machinery is often the source of serious losses that are not always realized. It can often be responsible for continuous leakage of fibre into troubles in the card room due to poorly built laps. We will deal with these three questions separately. The causes of the waste of good cotton are numerous, so it may be due to cotton choking up in the dust trunk. The cotton is not fed fast enough from the beater cage, and in such case is cut and wasted.

Excessive vibration of worn out beaters working in worn-out bearings gets the machine out of fine adjustment, cuts the fibre, and makes undue amount of fly. If one compares the figures of due waste from middling cotton given by the U. S. Government as the result of several tests made at mills, textile schools, etc., one would find the figure for the picker room waste to be around 1.80 per cent, while many mills with wornout equipment show a waste of 2.80 per cent. Assuming that only one-third of this difference is due to injured fibers and good cotton thrown into the waste, and taking a mill using 20,000 bales of cotton a year, this waste would amount to 70 bales, or at 35 cents per pound, would represent $14,000 a year.

Another big danger resulting from wornout equipment is the difficulty of maintaining standard weights. This can be due to wornout evener motion, binding and sprung feed rolls, binding aprons and pedals, wornout gears and knocked off motion. Inadequate distribution of air draft is also responsible for uneven lap. With the equipment in such conditions, it is frequent that the weight of the cloth fluctuates two or three per cent. Great troubles are incurred by overseers to keep the weights uniform. Changes have to be made all over the mill, and still often the cloth runs two per cent heavy. Adequate working allowance seems to be one per cent, but two per cent light would often breed troubles, especially on a buyer's market, while two per cent heavy would show a loss as follows: In a mill producing yearly 24,000 bales of 1,000 yards each, one per cent of its production would be 240 bales, or at 15 cents a yard, this will amount to $36,000 a year. The third great trouble is soft, unevenly built and split laps. This makes trouble in the card room, and almost always can be traced to the machinery not working adequately.

Other figures, however, will be given showing actual savings resulting from new equipment that would fully take care of the fixed charges on the investment. There is no doubt that new machinery with all latest improvements, such as swing frames for the evener motion, ball bearings on apron evener and the beaters will greatly improve the work. In most cases, it is fully possible to eliminate a picking process by using two beaters on the breaker picker. The amount of repairs is greatly reduced, so that together with the elimination of intermediate pickers, three men out of ten can be cut off. At rates prevailing in North Carolina in 1922 of $14.77 per week for picker room help, this would represent a saving of $2,300. It often happens that picker room repairs alone in a 30,000 spindle mill cost $400 a month or $4,800 a year. New equipment for the mill of such size would cost some $40,000, giving a yearly fixed charge of $6,400. The two items of savings would exceed the expense by $700.

The modern spinning frames can be operated with great saving. They can be run at greater speed. Being more heavily built, with more sampsons, heavier cylinders, they are able to stand great speed without vibration. The tape drive by greatly eliminating the slippage also contributes to it. Though running with greater production per spindle, the same number of spindles per spinner can be usually operated.

The modern frames are of wider gauge and higher, allowing by this a larger ring and longer traverse, thus considering increasing the

(Continued on Page 28)

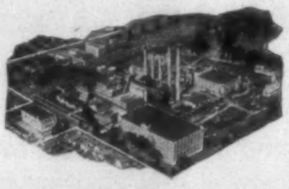
DOUGLAS CROWN
STARCH

Backed by 20 years of successful use. Combine quality, uniformity and economy. A thin boiling starch that evenly penetrates, giving the desired weight, strength and a smooth, pliable finish. Essentially the most perfect starch made.

Free from all impurities and foreign material, Douglas Crown Starch is especially adapted for sizing yarns and fabrics.

Douglas Starch is available in all special and standard grades—

DOUGLAS CROWN STARCH
(A refined thin boiling starch)
DOUGLAS PEARL STARCH
DOUGLAS POWDERED STARCH
DOUGLAS WARP SIZING STARCH
DOUGLAS LION MILL STARCH



An airplane view of the home of
Douglas Starch,
Cedar Rapids, Iowa

Our representative will promptly supply samples and full information. Write to

PENICK & FORD SALES CO., Inc.
Manufacturers of Corn Products
CEDAR RAPIDS, IOWA

NEW ORLEANS, LA. MONTGOMERY, ALA. NEW YORK, N. Y.

Southern Representatives
G. L. MORRISON, Greenville, S. C.
J. H. ALMAND, Atlanta, Ga.

New England Representatives
MARBLE-NYE COMPANY
Boston and Worcester, Mass.

SIZOL
TRADE-MARK

You appreciate the advantage of "better mill equipment." This includes the use of Sizol products in the dressing of your warps.

SEYDEL CHEMICAL COMPANY
Herman Seydel, President
Jersey City, N. J.

S. P. Rakestraw
La Grange Georgia

W. W. Greer
733 Augusta Street
Greenville, S. C.

DIXON'S SILICA GRAPHITE PAINT

Because of its better protective qualities makes frequent repainting unnecessary and so gives better protection at lower cost.

It is a natural combination of flake silica-graphite. The vehicle is best boiled linseed oil. It will not peel, crack or flake off because of the natural elasticity of flake graphite, while the silica is an anchor that withstands wear.

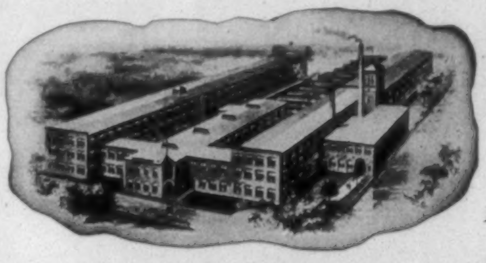
Write for Booklet No. 176B

JOSEPH DIXON CRUCIBLE COMPANY
Jersey City, N. J.
Established 1827

DRAKE
CORPORATION

"Warp Dressing Service Improves Weaving"

NORFOLK - - VIRGINIA



GREIST

LOOM DROP WIRES

All we ask is the opportunity to quote you—send sample of wire with request for quotation—we will submit samples of our product—prompt deliveries and unlimited capacity for large orders—small requirements receive the same attention.

THE GREIST MFG. CO., Dept. R, New Haven, Conn.
Southern Representative:
James McCabe, P. O. Box 219, Greenville, S. C.

Fundamental Issues in Southern Industrial Life Today

(Continued from Page 17)

terial and short time running is now the most vexing. At the present prices, it seems impossible to find a market for a full production, even if he could get enough raw material to run full time. The future will no doubt work out this problem, but it appears to seriously threaten for at least one more year.

Until raw material becomes more plentiful, and the prices such that goods will be more freely absorbed, mill building must practically cease, and the probability is that any increase in this section will come from the North, where conditions are even worse than with us.

Another serious problem is the falling off of our export trade at a time when badly needed, caused, as you are well aware, by the lack of purchasing power of other countries, and by the fact that the mills in those countries have a lower scale and are paying their employees in depreciated currency: in addition to that they are selling many hundreds of millions of yards in this country at a price lower than we can produce the goods, even though we are protected by a high tariff.

While the present difficulties are great, I can truthfully say that, as a whole, the managers of industry in the South are a courageous lot and are facing the issues, determined to come through victorious, as they have always done in the past.

As before stated, the vast majority of the managers of industry in the South are men of vision. Men who honor God and love their fellow men and we can leave their problems with the assurance that results will be as they should, and pass on to the next phase of the subject.

2. The Standpoint of the Employee and His Family.

In the first place, let me say that there can be no question but that the interest of manager and employee are the same, and when this fact is recognized by both, much suffering is avoided.

I believe that the employees of industry in our section are the best contented workers in the world, notwithstanding many efforts by outsiders to make them believe that they are terribly mistreated.

Everyone is willing to admit that the employee is entitled to the best wages and the best living conditions that the economic conditions will warrant, but all should understand that as conditions change, at least wages should change down as well as go up, and not always up and never down, as the agitator will insist.

Everyone who has kept abreast of the times knows of the wonderful progress made in the last forty years by industry in this country, and especially in the South. He also knows that, notwithstanding statements from some quarters to the contrary, that in the South the industrial workers, all things being considered, is better paid, is better housed than elsewhere, and that living, educational and moral conditions are much better.

As before stated, the worker is entitled to much, and he is right to strive for better and higher things. He has made great progress. By asking for it, where just, he has finally gotten what he wanted. When we compare forty years ago with today, we realize this. True, he has not reached his goal, but during that period he has probably made a greater advance than other working people in prosperity, education, morals and religion.

Probably the most far-reaching question before our country today is the age limit and the hours of labor. The manufacturer for many years has favored an age limit and a compulsory school attendance law, which would be the same. This question is now being submitted to the State Legislatures of the Nation to vote on an amendment of the Constitution, giving Congress the power to fix the age limit and hours of labor, taking this right away from the States. I think this is wrong and should be defeated, as it is invading the rights of the States to control their own domestic affairs.

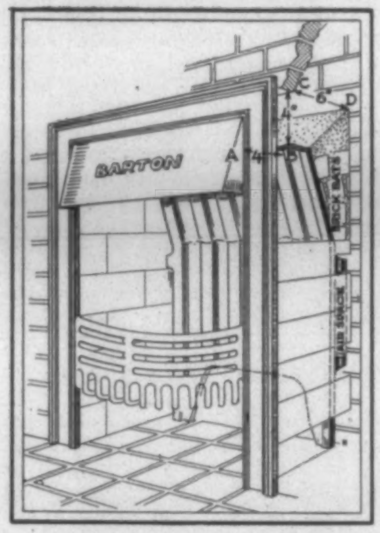
The States, almost without exception, now have just and humane laws on both these subjects, which are being willingly obeyed by the manufacturers.

Another danger of the amendment is that it purposes to give Congress the power to prevent any boy or girl from working until he or she reaches the age of eighteen. Does any sane person doubt the disastrous results if Congress should exercise such authority.

It is my belief that the mill managers and employees are daily coming nearer in their understanding of each other, and are rapidly working out their problems. I also believe that our National and State Governments should give them a rest from further regulation. Bills are being constantly introduced in our Legislatures which would be detrimental to the employees and management alike. We are kept busy explaining why this is true, as a consequence most of them are dropped, but enough are adopted to put a heavy burden on the textile manufacturer. In the language of the Prayer Book I would say "Good Lord, deliver us."

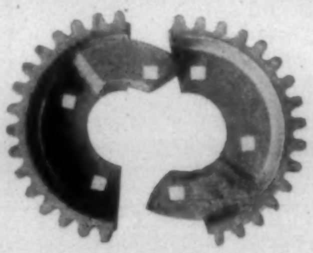
I consider regulation of immigration to this country necessary. We, of the South, do not want foreigners except the high class and intelligent, who are hard to get. Our employees are native and of the best blood. Many, as so often has been said, are from the mountain sections, where their ancestors settled many years ago. The most of them lived miserably, having no opportunities of education or enjoyment. Few at first could read and write. But with thirty years of opportunity in our mill communities, they are fast becoming an educated and refined people. Even the adults are being taught to read and write, and the night schools give the day workers an opportunity to study. Many mills have

The Permanent Way to Make Repairs, is to Use Metal Fire Backs.



If you like smoky fire places DO NOT USE this grate.

ERNEST L. BARTON
Specialties
302 N. Tryon St.
Charlotte, N. C.



THIS 2-PIECE GEAR CAN BE APPLIED IN THIRTY MINUTES

to any loom to replace a broken crank shaft gear. Saves material and time and also increases production.

Not a temporary makeshift but a permanent satisfactory repair part.

Write for sample.

Dan Gear Co.
Caroleen, N. C.

community workers, Y. M. C. A. secretaries and community nurses. All have first class graded schools. In fact, many mill villages have much better living conditions than our incorporated towns. Many young men from our mills are taking textile courses in State Colleges and are preparing to fill responsible positions inside the mills.

The girls, young and older women have admirable clubs under the trained leadership of college graduates.

Summing up, I wish to state that, in my opinion, we need have no fear of the future of industry in the South, for the reason that we have the newest and most up-to-date plants, the most wide-awake managers and, I repeat, the highest class operatives to be found anywhere. We shall be able to meet successfully the many vexing matters that are now pressing upon us, and I confidently expect to see this the greatest textile center of the world.

New Reed Manufacturing Co. At Greensboro, N. C.

The Greensboro Loom Reed Company, newly organized concern with quarters in the Bumpass Building on Lewis street, Greensboro, N. C., will start operations within the next few days.

The company will manufacture all kinds of loom reeds for the weaving of silk, cotton, wool or duck. Leno reeds, lease reeds, warper reeds, soldered reeds of every description as well as slasher combs and other reed and comb specialties will be manufactured. A reed repairing department wlil also be maintained.

Some of the machinery has been imported from England. Practically all machinery has been installed and the plant and machinery are modern in every detail, no expense being spared in order to make it so. Some of the most skilled reed craftsmen in the country have been employed. The company intends to manufacture products of the highest quality. About 10 or 12 men will be employed. The plant will be able to handle orders within 30 days.

George A. McFetters, owner and manager of the concern, is one of the best known reed men in the country.

Warren Webster & Co. Open New Offices.

Warren Webster & Co., of Camden, N. J., announce the opening of two branches at Butte, Mont., and Albany, N. Y.

The Butte office is located at 223 North Main street and is in charge of T. L. Sullivan, formerly of the Anaconda Copper Mining Company and more recently with the Montana State Engineering Department. This office will have charge of all business in the State.

The Albany office at 28 South Pearl street is in charge of Mrs. Horace A. Bond, for many years service engineer with the New York City branch.

PAGE
Protection Fence

the Fence with the super - heavy zinc coat.

Page Fence gives durable, positive, economical production. The interlocked fabric has a super-heavy zinc coat, five times as thick as ordinary galvanizing, applied after weaving. That means rust-resistance—long life—low cost per year.

Many of the South's greatest cotton mills are Page-Protected—have written us of their complete satisfaction. Why not add the benefit of a real fence to your plant? 'Phone or write now for estimates and prices.

Flint Mfg. Co., Gastonia, N. C., protected by Page Fence, erected by General Equipment Co.

GENERAL EQUIPMENT COMPANY
Charlotte, N. C.

Seaboard Air Line Railway
ANNOUNCES
Reduced Round Trip Fares For Summer Season, 1924

WEEK-END FARES

To Seashore and Mountain Resorts in North Carolina and Virginia. Tickets on sale Friday and Saturday. Limit following Tuesday. Season May 23rd to August 31st, 1924.

SPECIAL EXCURSION FARES

To Atlantic City and Niagara Falls on special dates during July and August.

SUMMER EXCURSION FARES

To Seashore and Mountain Resorts on sale daily May 15th to September 30th. Final limit October 31st.

SUNDAY EXCURSION FARES

From Charlotte and Monroe to Wilmington (Wrightsville Beach). Tickets on sale Saturday night, good returning Sunday night. Season May 31st to August 31st, 1924.

For further information call on nearest Seaboard Air Line Railway Ticket Agent, or address

W. L. McMORRIS
General Passenger Agent
NORFOLK, VA.

E. W. LONG
Division Passenger Agent
CHARLOTTE, N. C.

Simplicity Plus Strength

The few parts in a "Union" Fuse make it extremely simple to replace a blown link. The whole fuse can be taken apart and reassembled before a new link can be inserted in many other fuses.

That's an important point to be considered in the choice of "renewable" fuses. Better buy the non-renewable kind and save on first cost, if your workmen find renewals so difficult that they scrap the whole fuse after a blowout.

There's unusual strength and ruggedness in every one of the parts in a "Union."

That is why they withstand the greatest number of blowouts. And this feature, plus ease of renewal, are the reasons why

The "Union" saves more than ANY other renewable fuse.

"Union" Renewable and Non-Renewable Fuses are sold by jobbers and dealers.

Send for a copy of our new catalog. It's full of up-to-date fuse facts.

'UNION'
FUSES
RENEWABLE & NON-RENEWABLE

Chicago Fuse Mfg. Co.

Manufacturers also of Switch and Outlet Boxes, Cut-out Bases, Fuse Plugs, Fuse Wire and Automobile Fuses

CHICAGO—NEW YORK

Dr. D. H. Hill Dies At Blowing Rock

Dr. Daniel Harvey Hill, secretary of the North Carolina Historical Commission and former president of N. C. State College, and father of D. H. Hill, Jr., associate editor of thr Southern Textile Bulletin, died July 31st at Blowing Rock, N. C., where he went, accompanied by relatives, in the hope that the mountain air would aid in the restoration of his strength.

Dr. Hill was born at Davidson College in 1859, the son of Lieutenant General Daniel Harvey Hill, of the Confederate Army, and a great-grandson of Col. William Hill, of the Revolutionary War. His mother, Isabella Morrison Hill, was a daughter of Rev. R. H. Morrison, and a grand-daughter of General Joseph Graham, of the Revolution. Dr. Hill's father was president of the University of Arkansas and his grandfather was president of Davidson College.

Prepared for college at the Military Institute at Charlotte and at Horner and Graves Military Academy at Hillsboro, he was graduated from Davidson College in 1880. In 1885, he received the degree of Master of Arts from Davidson and in 1905 the degree of Lit. D. In 1910 the University of North Carolina conferred on him the degree of Doctor of Laws.

From 1880 to 1889, Dr. Hill was professor of English at the Georgia Military and Agricultural College at Milledgeville, Ga., and from there was called to the professorship of English at the North Carolina College of Agriculture and Mechanic Arts. He held this position until 1908 when he was elected to the presidency to succeed George T. Winston. He served as president during the years of the institution's growth until 1916 when he retired from the presidency to devote his efforts to historical writing.

Dr. Hill, before he took up the work on which he was engaged when he died, had already done considerable historical research and writing. He was the author of "North Carolina Troops in the Civil War," published in 1889; "Greene's Retreat," a booklet published in 1901; Young People's History of North Carolina," published in 1907. In collaboration with two of his associates, he aided in 1903 in the preparation of "Agriculture for Beginners," a widely used text book and with the same associates edited "The Hill's Readers," a series of five volumes published in 1906.

Outside of his historical and literary work, Dr. Hill was an active figure in many phases of the State's life. He was one of the founders of the North Carolina Literary and Historical Society and of the Southern Education Association. He was president of the State Teachers' Assembly in 1909; of the State Forestry Association in 1910; and of the State Folk Lore Society in 1916. For several years, he was member of the executive committee of the American Association of Agricultural Colleges. In 1907, he was appointed by Governor Glenn, a member of the Historical Commission, and with the resignation of R. D. W. Connor was made secretary of the commission.

At the beginning of the war, he was appointed by Governor Bickett as chairman of the North Carolina Council of Defense and as the head of the war-time civilian forces of the State rendered very effective service.

In July, 1885, Dr. Hill was married to Pauline White, daughter of Dr. Samuel G. White, of Milledgeville, Ga., who, with five children, survive him. The surviving children are: Miss Pauline Hill, of Raleigh; Daniel Harvey Hill, Jr., Charlotte; Mrs. Max Abernethy, Raleigh; Samuel White Hill, Raleigh; and Miss Randolph Hill, Raleigh.

In addition, Dr. Hill is survived by two grand-children, D. H. Hill III, Charlotte; and Pauline Hill Abernethy, Raleigh.

Number Twenty-five

(Continued from Page 25)

yarn on the bobbin, and greatly reducing the doffing and spooling expense. The latter is decreased as the work of the spooler consists in handling bobbins and tying knots. We will give a concrete example of savings to be secured. The spinning cost given includes some item of general overhead but does not include interest and depreciation.

Comparison of an old style warp frame with a modern one. 13s yarn:

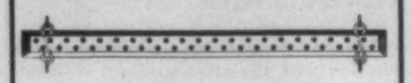
	Old	New
Gauge	2¾"	3½"
Ring	1½"	2"
Traverse	6"	7"
Yarn on bobbin	1100 yds.	2200 yds.
R.P.M. FR.	125	150
Lbs. spindle week	3.00	3.70
Lbs. spindle year	156	192
Doffs a week	45	20
Time loss with other allowances	12%	8%
Spinning cost	1.97	1.60
Doffing	.62	.22
Spooling	1.05	.64
Total cost	3.64	2.46

	Old		New
Saving per lb.		$1.18	
Sav. spindle year		2.27	
Waste	3%		2%
Lbs. per year	4.7		3.1
Per lb. labor, cotton loss	10.64		9.46
Loss per year	50		29
Total saving		2.48	
Investment per spd.		6.00	
Fixed charge 16%		.96	
Net saving per spd. year		1.52	

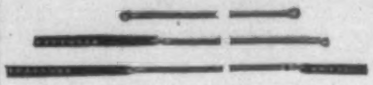
Another saving that can be easily effected in the spinning room is installation of bunch builders for feeler looms, so on 400 looms the waste was reduced from four per cent to two per cent, that is, to 400 pounds per week. The loss of value in cotton is 15 cents, the loss of manufacturing 3.60, the total loss per pound 18.60. The yearly saving was $3,800. The limit of space prevents us from giving the numerous advantages of an adequate system of humidity control, saving in handling by conveyors, advantages of individual drives, ball bearings, waste preventing and reclaiming equipment, etc.

Industrial Engineer.

Improved Dobby Chain



Dobby Cords



Rice Dobby Chain Co.
Millbury, Mass.
Send Us Your Order Today

SPINNING RING SPECIALISTS
FOR MORE THAN FIFTY YEARS

SPINNING RINGS
TWISTER RINGS
SILK RINGS

DIAMOND FINISH
TRAVELLER CLEANERS
TRAVELLER CUPS
GUIDE WIRE SETS

WHITINSVILLE SPINNING RING CO.
WHITINSVILLE, MASS.

Service

"Service" is not a sentiment but a definite principle of business success. The use of

WYANDOTTE TEXTILE SODA

WYANDOTTE CONCENTRATED ASH

WYANDOTTE KIER BOILING SPECIAL

by an ever increasing number of mills is easily explained by their successful service to the user.

Ask your supply man

"Wyandotte"

The J. B. FORD CO., Sole Mnfrs.
Wyandotte, Michigan

Parks-Cramer Co.'s Air Conditioning Devices

(Continued from Page 22)

develop a very considerable force so that temperature changes result in very definite and appreciable movements of the mechanism. After adjustment of the instrument may be altered at will. The "trial and error" method used in the case of a hygroscopic regulator is unnecessary. A slight turn of a graduated dial is all that is required for a positive and permanent adjustment.

This regulator may be used to control relative humidity, or the absolute humidity—as is sometimes desired for special purposes. It may also be used to maintain any desired relations between the relative humidity or the absolute humidity and the temperature, such, for instance, as a relation corresponding to a constant regain in textiles or other materials.

This type of regulator may be used with a central station system or with any combination of humidifying and heating devices. It makes ideal air conditioning possible. Its operation is unaffected by the presence of dust or vapors. It performs with consistent accuracy and requires only such occasional cleaning as is usual for factory equipment.

When adjusted to maintain a varying relative humidity as temperature varies, to correspond with a selected value of regain by Hartshorne's Tables, the regulator will hold the proper relation indefinitely.

Simple as it may appear the measurement of relative humidity requires considerable skill and care. A conveniently arranged and easily carried sling pschrometer is furnished to ensue accurate readings of wet, and dry bulb temperatures. The old form of stationery hygrometer is wrong usually 95 per cent of the time and its indications are to that extent misleading.

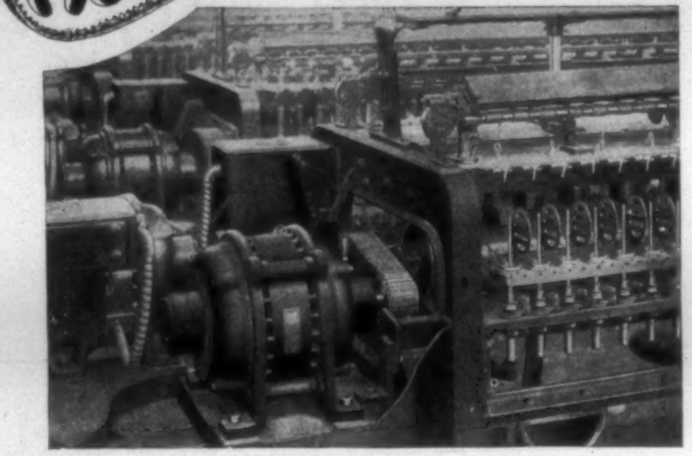
Parks-Cramer Company has gone to great expense in producing the movie film "Thirsty Cotton" which depicts far better than words can do, just how vitally good running work is associated with adequate humidity uniformly controlled. Showings of this film have been made at many cotton mills; it is free q.w snpmxo 1-Jorelativeoisnmlfdw for the asking. It interests everyone that has to do with textile manufacturing.

Bahnson Humidifiers

(Continued from Page 18)

There have been additional improvements made from time to time until today the merits of the Bahnson humidifier are universally recognized and it is used practically all over the United States and Canada and a number of foreign countries, installations being in operation in Japan, China, Australia, South Africa, Spain, Switzerland, France, Belgium, Norway and England.

MORSE SILENT CHAIN DRIVES



7--1-2 H. P. Morse Silent Chain driving spinning frames in a southern mill. Driven 1750 R. P. M., driven 1250 R. P. M., centers 8--1-2 inches

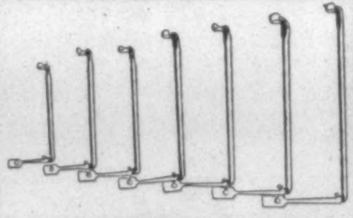
Improves Yarn Quality

Morse Silent Chain Drives transmit 98.6% of the motor horsepower developed with constant and positive speed ratios. Improve the quality of the yarn by eliminating pulsating yarn at the traveler—a common cause of broken yarn when belts with their varying speeds are used. Morse Chains also prevent loss due to fly and dirt from pulleys and belts getting into the work. Cleaner yarn is produced and customers better satisfied.

Let Morse Engineers help you.

MORSE CHAIN COMPANY
Ithaca, N. Y.

MORSE ROCKER JOINT



How Would You Explain The Fact---

That over 1,000,000 Flyer Pressers have been manufactured and shipped from our plant during our twenty-five years of service to the textile mills? There is only one explanation—superior quality, service and satisfaction.

Only the best Norway Iron is used in the manufacture of Our FLYER PRESSERS and every one is properly fitted and adjusted before leaving our plant.

"Quality features built-in, not talked-in."

Catalog on Request

Southern Spindle & Flyer Co., Inc,
We Manufacture, Overhaul and Repair Cotton Mill Machinery
Charlotte, N. C.

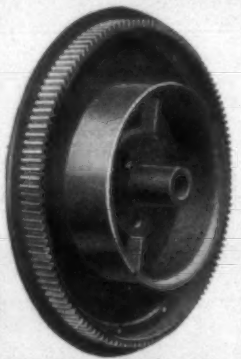
W. H. MONTY
Pres. and Treas.

W. H. HUTCHINS,
V.-Pres. and Sec.

AMERICAN TRUST CO.
BOND DEPARTMENT
Specializes in Textile Corporation Finance.
Negotiates purchase and sale of Cotton Mills.
Offers conservative investments in Textile preferred stocks to yield from 6 1-2 to 7 1-2 per cent.

BOND DEPARTMENT
American Trust Co.
FRANK B. GREEN, Manager
CHARLOTTE, N. C.

Mossberg Pressed Steel Corporation


Geared and Friction Let-Off Loom Beam Head
Patented June 1, 1920

All Steel

LOOM BEAM HEADS
SECTION BEAM HEADS
ADJUSTABLE BEAM HEADS (SPLIT AND SOLID)
NARROW FABRIC BEAMS
BEAMS FOR ELASTIC AND NON ELASTIC WEB
BEAMS FOR SILK RIBBON
"NEW PROCESS" DROP WIRES
JACK SPOOLS

Attleboro, Mass.

MANUFACTURED WEATHER
makes
"Every day a *good* day"
Humidification · Dehumidification
Heating · Ventilation · Purification
Drying
Carrier
Engineering Corporation
750 Frelinghuysen Ave. Newark, N. J.
Boston · Buffalo · Chicago · New York · Philadelphia

Moreland Size
"The Warps Best Friend"
Moreland Sizing Company
Spartanburg, S. C.
J. T. MORELAND, President

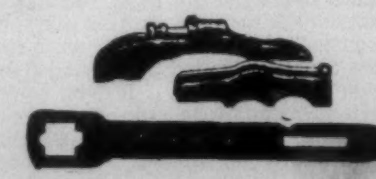
SOUTHERN DISTRIBUTING COMPANY
50 Market Street, Charleston, S. C.
Griffin, Ga. Greenville, S. C. Charlotte, N. C.
Manufacturers and Distributors
—of—
Stauss Rectified Tallow, Oil and Gums for all warp sizing and finishing purposes

Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

	Page
—A—	
Allis-Chalmers Mfg. Co.	—
American Laundry Machinery Co.	—
American Moistening Co.	23
American Textile Banding Co.	—
American Trust Co.	30
Amory, Browne & Co.	36
Anchor Post Iron Works	16
Arabol Mfg. Co.	24
Arkansas Cotton	33
Arnold, Hoffman & Co.	—
Ashworth Bros.	42
Atlanta Brush Co.	—
Atlanta Harness & Reed Mfg. Co.	23
Atlantic Dyestuff Co.	—
—B—	
Bahnson Co.	—
Baily, Joshua L. & Co.	36
Bancroft, Jos. & Co.	—
Barber-Colman Co.	36
Barber Mfg. Co.	—
Barton, Ernest L.	27
Best, Edward H. & Co.	22d
Better Equipment Campaign	6
Borne, Scrymser Co.	19
Bosson & Lane	23
Brown, David Co.	24
Brown-St. Onge Co.	—
Butterworth, H. W. & Sons Co.	—
—C—	
Carolina Specialty Co.	—
Carrier Engineering Corp.	30
Catlin & Co.	27
Charlotte Leather Belting Co.	44
Chicago Belting Co.	—
Chicago Fuse Mfg. Co.	28
Clipper Belt Lacer Co.	—
Cocker Machine & Foundry Co.	42
Collins Bros. Machine Co.	—
Converse & Co.	36
Cooper-Hewitt Electric Co.	—
Corn Products Refining Co.	43
Courtney, Dana S. Co.	22c
Crompton & Knowles Loom Works	—
Curran & Barry	36
Cyclone Fence Co.	22
—D—	
Dan Gear Co.	27
Dary Ring Traveler Co.	23
Davidson, Jos. L. Co.	23
Diamond State Fibre Co.	22a
Dixon Crucible Co., Joseph	26
Dixon Lubricating Saddle Co.	30
Drake Corp.	26
Draper, E. S.	22d
Draper Corp.	1
Dronsfield Bros.	38
Druid Oak Belting Co.	23
DuPont de Nemours, E. I. & Co.	11
—E—	
Economy Baler Co.	2
Emmons Loom Harness Co.	23
Entwistle, T. C. Co.	—
Esceola Inn	12
—F—	
Fafnir Bearing Co.	—
Fales & Jenks Machine Co.	31
Farish Co.	22d
Firemen's Mutual Insurance Co.	39
Ford J. B. Co.	29
Franklin Process Co.	—
—G—	
Garland Mfg. Co.	—
General Electric Co.	—
Grant Leather Corp.	41
Graton & Knight Mfg. Co.	—
Greist Mfg. Co.	26
—H—	
Hepworth, Jno. W. & Co.	16
H. & B. American Machine Co.	17
Hetherington, John & Sons Co.	—
Hollingsworth, J. D.	2
Hopedale Mfg. Co.	—
Houghton, E. F. & Co.	13
Howard Bros. Mfg. Co.	—
Hyatt Roller Bearing Co.	—
—J—	
Jackson, Hill & Co.	—
Jacobs, E. H. & Co.	—
Johnson, Oliver & Co.	9
Jordan Mfg. Co.	24
—K—	
Kaumagraph Co.	15
Keever Starch Co.	—
Klauder-Weldon Dyeing Machine Co.	38
—L—	
Ladew, Edward R. Co.	10
Langley, W. H. & Co.	36
Leslie, Evans & Co.	36
Lestershire Spool & Mfg. Co.	—
Link-Belt Co.	—
Lockwood, Greene & Co.	—
Lowell Shuttle Co.	—
—M—	
Macrodi Fibre Co.	—
Marston, Jno. P. Co.	37
Mathieson Alkali Works	—
Mauney Steel Co.	37
Memphis Cotton	34
Merrow Machine Co.	33
Metallic Drawing Roll Co.	2
Metz, H. A. & Co.	2
Minter Homes Co.	—
Mississippi Cotton	35
Moreland Sizing Co.	30
Morse Chain Co.	29
Mossberg Pressed Steel Corp.	30
—Mc—	
McCaughey, Edward J.	37
—N—	
National Aniline & Chemical Co.	—
National Ring Traveler Co.	2
Newburger Cotton Co.	34
N. Y. & N. J. Lubricant Co.	—
North Carolina Cotton	32
Norwood Engineering Co.	42
—O—	
Oklahoma Cotton	35
—P—	
Page Fence & Wire Products Assn.	27
Paige, Schoolfield & Co.	37
Parker, Walter L. Co.	—
Parks-Cramer Co.	4-5
Paulson, Linkroum & Co.	37
Pawtucket Spinning Ring Co.	42
Penick & Ford, Ltd.	25
Perkins, B. F. & Sons	—
Puro Sanitary Drinking Fountain Co.	—
—R—	
R. I. Warp Stop Equipment Co.	22d
Rice Dobby Chain Co.	29
Ridley Watts & Co.	37
Robinson, John L. & Co.	34
Roessler & Hasslacher Chemical Co.	—
Rogers Fibre Co.	—
Root Co.	—
Roy, B. S. & Son	—
—S—	
Saco-Lowell Shops	43
Sanders, Smith & Co.	38
Sayles Finishing Plants	—
Scott, Henry L. & Co.	24
Seaboard Railway	27
Sellers, Wm. & Co.	—
Seydel Chemical Co.	26
Seydel-Thomas Co.	—
Siggers & Siggers	38
Sirrine, J. E. & Co.	—
S. K. F. Industries	3
Sonoco Products	—
Southern Distributing Co.	30
Southern Railway	21-31
Southern Spindle & Flyer Co.	29
Spinks, John D.	2
Stafford Co.	44
Steel Heddle Mfg. Co.	22c
Stein, Hall & Co.	—
Sugar Creek Coal Sales Co.	22d
Sydnor Pump & Well Co.	35
—T—	
Tatum, Pinkham & Greey	36
Terrell Machine Co.	—
Texas Cotton	33
Textile Mill Supply Co.	—
Thomas Grate Bar Co.	32
Tolhurst Machine Works	19
Tripod Paint Co.	2
—U—	
United Chemical Products Co.	43
U. S. Bobbin & Shuttle Co.	24
U. S. Ring Traveler Co.	38
Universal Winding Co.	38
—V—	
Victor Ring Traveler Co.	34
Vogel, Joseph A. Co.	—
—W—	
Washburn Printing Co.	—
Watson, L. S. Mfg. Co.	43
Wellington, Sears & Co.	36
Westinghouse Electric & Mfg. Co.	—
Whitin Machine Works	14
Whitinsville Spinning Ring Co.	29
Williams, J. H. Co.	—
Williams, I. B. & Son	—
Wilts Veneer Co.	38
Wolf, Jacques & Co.	—
Woods, T. B. Sons Co.	39

DIXON LUBRICATING SADDLE CO.
BRISTOL, RHODE ISLAND


Use Dixon Patent Stirrup Adjusting Saddles, the latest invention in Saddles for Top Rolls of Spinning Machines. Manufacturers of all kinds of Saddles, Stirrups and Levers.

WRITE FOR SAMPLES

Humidifier Development

(Continued from Page 7)

attention, and regulate humidities within very narrow limits.

The application of humidity control and the benefits derived from higher humidities immediately led to the installation of very much higher evaporating capacities. Without adequate artificial humidifying capacity, automatic humidity regulation could accomplish very little, as only when outside humidity conditions were favorable would regulators function.

In the earlier days, fluctuations of relative humidity in a spinning room supplied with what was considered good humidification, would vary all the way from 30 per cent to 70 per cent. It is common practice today to install artificial humidification of such capacity that relative humidities of from 65 per cent to 75 per cent are maintained under substantially all conditions of outside weather, regardless of the dryness and of the wind velocity. At this point, attention should be called to the relation which was discovered to exist between variation in moisture in the textile fibre, depending on the varying conditions of temperature and humidity.

Investigation of the moisture or "cotton regain'" has been the subjec of much study and research by different observers. Fairly definite laws have been laid down which show clearly the extent to which the moisture in any textile fibre varies as temperature and humidity change. It has been further demonstrated, especially in the case of cotton, that uniform manufacturing results are secured by maintaining a variable scale of humidities at different temperatures, so that the fibre itself will, regardless of temperature, contain a uniform regain. It is interesting to note that the modern humidity regulator isusually constructed not to maintain uniform relative humidity, but to regulate the humidifying system so that the temperature in the mill will be maintained at a variable scale and just exactly at the right per cent to hold a uniform regain in the fibre.

While laws of cotton regain have not been definitely established to cover unusal constructions of specially hard twist or cloth with widely different sizing, investigations along these lines are under way in many laboratories, and additional information and knowledge of these laws will soon be taken advantage of in operation of humidifier systems.

Summarizing, then:-

The efficiency of the present day humidifiers or air conditioners is many times that of the device on the market fifteen years ago:

Today's improved devices unquestionably maintain far more uniform conditions over the room than were possible with any of the older equipment:

The development of automatic humidity control as applied to humidifying systems in the textile industry represents quite as important a step as the increase in humidifier efficiency :

Finally, no textile mill can operate efficiency, so far as quality of the prorduct, manufacturing economy, or comfort and health of the operatives is concerned, without a combination of the most efficient types of humidifiers or air conditioners, of adequate capacity to meet all varying outside weather conditions, and thoroughly equipped with automatic humidity regulation.

Preparing For Textile Show

(Greenville Daily Piedmont)

Work of preparing Textile Hall for the Southern Textile Exposition to be held here October 20 to 21 is progressing rapidly, officials of the corporation announced Friday morning. Floors in the balcony are being lowered in order to present a flat uniform surface for the showing exhibits and the hall is undergoing renovation from top to bottom.

The new addition to the exposition building is completed and all space on both floors sold. With the exception of a few smaler and les desirable allotments in the balcony, al available space in both buildings has been disposed of, it was said, and exhibitors will start installing heavy material as early as September first. The exposition of this year will be at least 50 percent larger than any previous show, officials promised.

In addition to looms and machinery for the manufacture of cotton cloth as heretofore exhibited at these shows, manufacturers announce that for 1924 they will in addition show the latest developments in devices for turning out silks and worsted. This is a departure from the regular routine but one which is believed will interest exposition as it will show the possibilities open to the South in these two fields.

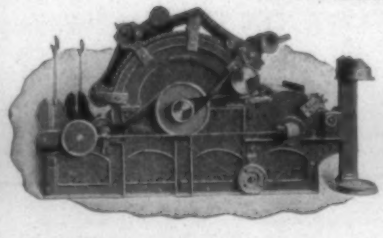
Link-Belt Puts Out New Grease Cup.

A grease cup is a small matter in a plant or factory, but it can be a nuisance and a cause of expense far out of proportion to the cost of the cup. Recognizing this, the Link-Belt Company of Indianapolis has developed a new top for their regular compression grease cup. This top is hexagonal in shape, which provides not only a good grip for the hand but one for a wrench. Cold, stiff grease makes a compression cup very hard to turn, and a pipe wrench is not always accessible. The hexagonal shape provides grip spaces for the ordinary wrench.

Also, this cup is provided with a raised slot so that the cup can be turned with a screw driver, when it is so located that it is inconvenient for the hand or wrench.

Ruggedly made of malleable iron, the new cup, known as the Hex-Top grease cup, is absolutely grease tight.

Complete Equipment
Cotton Machinery
Built by Specialists

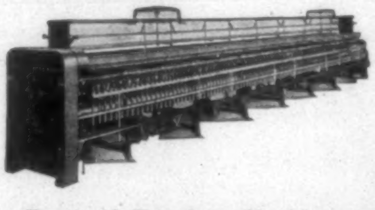


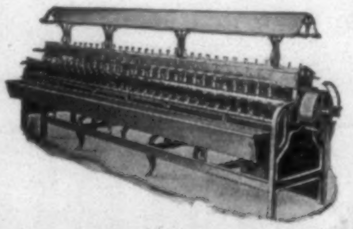
Woonsocket Machine & Press Co., Inc.
Woonsocket, Rhode Island, U. S. A.
Picker and Card Room Machinery

Feeders
Vertical Openers
Breaker Pickers
Conveyers
Bale Breakers
Finisher Pickers
Thread Extractors
Roving Waste Openers
Revolving Top Flat Cards
Drawing Frames, Slubbers
Intermediate, Roving and Jack Frames

Fales & Jenks Machine Company
Pawtucket, Rhode Island, U. S. A.
Ring Spinning and Twisting Machinery

Ring Spinning Frames for Cotton, Ring Twisters for Cotton, Wool, Worsted, Silk, Jute, Flax and Novelty Yarn.





Easton & Burnham Machine Company
Pawtucket, Rhode Island, U. S. A.
Warping and Winding Machinery

Spoolers
Beam Warpers
Ball Warpers
Skein Winders
Reels
Doublers
Banding Machines
Card Grinders
Spindles for Cotton and Silk

J. H. Windle, Northern and Export Agent — Pawtucket, R. I.
J. H. Mayes, Southern Agent — Charlotte, N. C.

NEW FLORIDA TRAIN

"LAND OF THE SKY SPECIAL"

VIA

Southern Railway System

Southern Railway announces the inauguration of new train service between the Carolinas and Florida, effective June 28-29, 1924.

SOUTHBOUND		SCHEDULE		NORTHBOUND
5:20 P. M.	Lv.	Charlotte	Ar.	9:30 A. M.
10:55 P. M.	Lv.	Columbia	Lv.	5:40 A. M.
3:55 A. M.	Ar.	Savannah	Lv.	12:45 A. M.
8:15 A. M.	Ar.	Jacksonville	Lv.	8:15 P. M.

This new train will handle through sleeping car between Charlotte and Jacksonville. Asheville and Savannah, Asheville and Miami, Cincinnati and Tampa, via Asheville.

Passengers destined Savannah may board Savannah sleeping car at Columbia and occupy same in Savannah until 7:00 A. M.

Passengers destined to points south of Jacksonville on Florida East Coast Railway and Atlantic Coast Line Railroad, may walk from Charlotte-Jacksonville sleeper to Miami or Tampa sleepers before reaching Jacksonville next morning and avoid change of cars in Jacksonville.

Dining car service and observation car between Charlotte and Columbia.

Through day coach service between Asheville, Columbia, Savannah and Jacksonville.

This new through train goes via Southern Railway to Savannah thence Atlantic Coast Line Railroad to Jacksonville.

For further information and sleeping car reservations call on any Southern Railway Agent.

W. F. COCHRANE
City Ticket Agent
237 West Trade Street
Telephone 20
Charlotte, N. C.

R. H. GRAHAM
Division Passenger Agent
237 West Trade Street
Telephone 3860, Branch 7
Charlotte, N. C.

COTTON
Let Us Quote You

Southeastern Selling Agency
LESSER-GOLDMAN COTTON COMPANY
OF ST. LOUIS, MO.
P. H. PARTRIDGE, Agent, Charlotte, N. C.
Extra staples, and good 1 1-16 and 1⅛ cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.

STEWART BROTHERS COTTON COMPANY
(Incorporated)
of New Orleans, La.
COTTON MERCHANTS
Charlotte, N. C. STAPLES A SPECIALTY Greenville, S. C.

S. B. TANNER, JR. Postal Phone MOREHEAD JONES
Local Phone 821 Long Distance Phone 9998
TANNER & JONES
CHARLOTTE, N. C.
Representing
NEWBURGER COTTON CO. **TARVER, STEELE & COMPANY**
Memphis, Tenn. **Dallas, Texas**

Local Phone 4480 Postal L. D. Phone 9991
J. M. WILLIAMS AGENCY
B. B. Jackson, Agent
Cotton Merchants
Charlotte, N. C.
Home Office, Winder, Ga.

William and York Wilson
Incorporated
Cotton Brokers
Rock Hill, S. C.
Representing reliable shippers throughout the cotton belt.

J. EDW. KALE & CO.
Cotton Brokers and Merchants
Extra staples and Short Cotton
Lincolnton, N. C.

GEO. M. ROSE, JR.
Cotton
19 1-2 East Fourth Street
Charlotte, N. C.

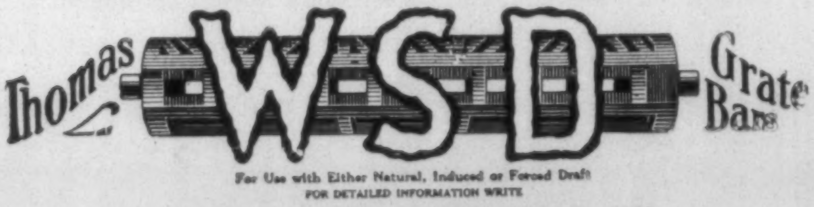
SANDERS, ORR & CO.
Cotton
Charlotte, N. C.

J. L. BUSSEY & CO.
Cotton
Greenville, S .C.

H. H. WOLFE & CO.
Cotton
Monroe, N. C.

LINEBERGER BROS.
BROKERS—SHIPPERS
Carolina and Delta Staples
All Kinds Short Cotton
Lincolnton, N. C.

Fire Without Having A Cleaning Period On



For Use with Either Natural, Induced or Forced Draft
FOR DETAILED INFORMATION WRITE
THOMAS GRATE BAR COMPANY
BIRMINGHAM, ALA.

Carrier Central Station System

(Continued from Page 10)

equipment can be hung directly on the ceiling and in most cases there will be no difficulty in finding space in which to put it.

The automatic controls for the central station system consist of one dewpoint control on the humidifier, and individual room controls located in each of the rooms to be humidified. The operation of the dewpoint control is based on the physical principle that within the normal range of room temperatures experienced in industrial work, for any given humidity there is practically a constant difference between the room dry bulb temperature and the dewpoint temperature (or the temperature maintained at the apparatus). For instance, a difference of 15½ degrees between the dry bulb and dewpoint temperatures will give a relative humidity of 60 per cent, no matter whether these respective temperatures happen to be 90 degrees and 74½ degres, or 85 degrees and 69½ degrees. Consequent by controlling the dewpoint and dry bulb temperature of the air any desired relative humidity can be maintained.

The dewpoint control consists of a simple expansion thermostat exposed to the saturated air leaving the humidifier. This control actuates the fresh and return air dampers and the steam supply to the circulating water, and so controls them that in the winter the air leaving the humidifier retains exactly the number of grains of moisture per cubic foot for which the control is set.

The room control consists of a thermostat and an hygrostat, the first named being for winter control and the second for summer control. The thermostat controls the supply of steam to the heaters located in the room distributing ducts and maintains the room at a constant dry bulb. Now since the amount of moisture in the air is maintained constant by the dewpoint control at the apparatus (as explained above) the relative humidity is automatically fixed. Under summer conditions the hygrostat regulates so closely the amount of air entering the room that the relative humidity is controlled with a variation of 4 per cent or less. The switch from summer to winter operating conditions or vice versa is taken care of automatically by means of a simple relay.

For the smaller unit system referred to in a previous paragraph the control also consists of a thermostat and a hygrostat, the former controlling the steam supply to the heaters and the latter controlling the water pressure at the spray nozzles.

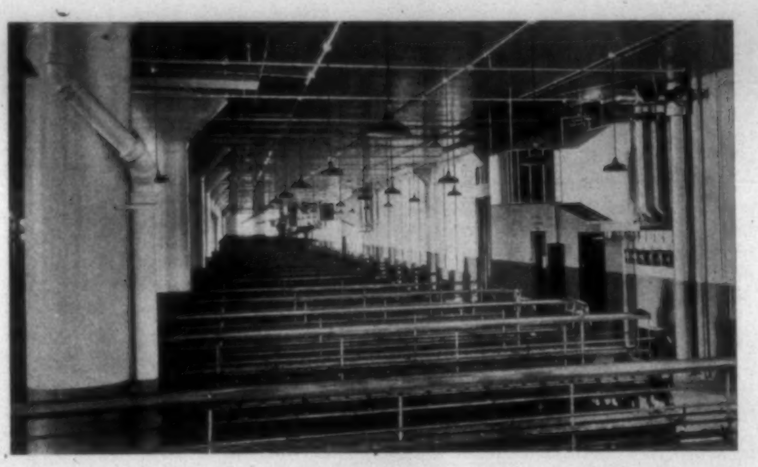


Fig. 6

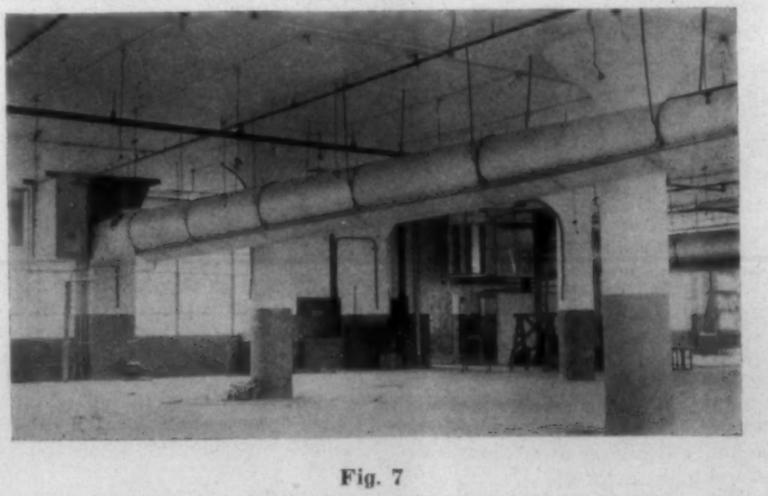


Fig. 7

Fixes Blame on Retailer For Condition in Trade

A Southern mill president writes: "For a man to attempt to diagnose the cotton and cotton goods situation for the past year would be nothing more or less than a guess. All the information that can be compiled from statistics for the past years has been useless.

"In view of the fact that the crop was short, and that mills curtailed production, the price of cotton goods has not been one at which the mills could make a reasonable profit. It is my opinion that not one of us had any idea of the amount of cotton goods that was in various establishments throughout this country.

"In a recent article in your paper, there was a statement that the retailer was putting a price on cotton goods which was all out of reason. Recently, while in Memphis, I had occasion to notice the price at which a store had marked a well-known piece of gingham. This price was 250 per cent higher than the price at which the mill was offering this goods. It is our opinion that the retailer could materially help in starting up the spindles in this country if he would reduce his retail prices to a figure more in keeping with the purchase price.

"As for our mills, we are operating at approximately 50 per cent of our capacity. However, we anticipate that with the July option out of the way futures will break, and it is also our opinion that the price of cotton goods will hold. There may possibly be a reduction in some certain numbers, but in view of the fact that curtailment is so general and that mill stocks are being reduced constantly, the price of goods will remain stable even though the future months decline. With a decline of 250 to 300 points in the future we expect to take on business, even though it shows us little if any profit.

The crop throughout this section of Tennessee is looking fine, although about three weeks late. The farmers report that the boll weevils have not shown up to any great extent. We of this organization are placing our guess at 12,000,000 bales. We may be wrong, but our guess has been good in the past and we are trusting the same will hold true in the future."—Daily News Record.

Textile Merchandising

Dry goods merchants meeting in Chicago are reported to have given special attention to the problem of sales and to present conditions which have brought the textile trades into so much difficulty. their unanimous opinion seems to be that every effort should be made to increase sales and that to this end it is necessary that every possible economy be practiced in order not to add to costs and prices. One of the leading merchants is quoted as saying that there has been probably too much diversification and new goods have not been coming regularly into the stores. This is a condition which undoubtedly exists in many instances, but it is one that was originally initiated by retailers in order to tide themselves over a period of very slack consumption of staple commodities.

Retailers have made strong efforts to push their volume of sales up to the point that they maintained in previous seasons. Finding that impossible of accomplishment if dependence were placed entirely on the staple lines the retailers sought out novelties and catered to consumers' desire for changing styles. This branch of their business expanded rapidly and assisted considerably in maintaining for the stores a volume of sales which was considered satisfactory. While this resulted in bringing some recompense to the retailers it has not been conducive to prosperity for the manufacturers of staple textile goods. As a matter of fact, it is feared that the tendency has been to injure the trade in the regular lines and thereby stimulate the movement toward curtailment of mill production.

The harmful influence of this condition is today better understood by the managers of retail stores. The best of them now realize that if they would prosper they must lend their assistance to bring prosperity to the producers of their staple lines. They must go into the market constantly for new supplies. To do that it is not necessary to overstock, but at least they can assist in returning a normal volume of business to the primary markets —Journal of Commerce.

May Get Help For Saving Drowning Woman

Lester Rooks, 19-year-old textile worker of Enoree and Laurens, S. C., may be the beneficiary of Carnegie commission as the result of his saving Miss Willie Roberts, Spartanburg nurse, from drowning several weeks ago.

Rooks was in Spartanburg some weeks ago and was among those in swimming at the recently opened municipal park, according to his story, which is confirmed by the telephone messages from that city. While there a young woman in swimming came dangerously near drowning, going under twice before her screams attracted anyone to the rescue.

Rooks, a slender boy who is six feet and two inches tall but weighs only 160 pounds, plunged into the water and saved the young woman. She proved to be Miss Willie Roberts, who is a nurse at the General Hospital in Spartanburg.

MAKE YOUR WANTS KNOWN
Through The
Bulletin Want Department
Read in More than 95% of the
Southern Textile Mills
Rate: $1.50 per inch per insertion

COBB COTTON CO.
Cotton
Mississippi Delta Staples
Our Specialty
Helena, Ark.

ARKANSAS
COTTON

P. E. HENSON & CO.
Cotton
All Grades and Staples
Little Rock, Ark.

W. F. EVANS & CO.
Cotton
In the Heart of the Delta
Mississippi and Arkansas Rivers,
Benders and Staple Cotton
Helena, Ark.

C. H. Crutchfield
E. W. Crutchfield
C. H. Crutchfield & Co.
Established 1909
Benders and Extra Staples
Hope, Arkansas

Anderson Cotton Co.
Cotton Merchants
Delta Character Cotton
Helena, Ark.

ARKANSAS COTTON GROWERS' COOPERATIVE ASSOCIATION
Main Office, Little Rock, Arkansas
Shippers of All Kinds of Arkansas, Tennessee and Missouri Cotton
F. L. PAGE, Gen. Mgr. Cotton Department

TEXAS COTTON
GOOD SPINNING — SMALL WASTE

LEVERETT & MOORE
Texas Cotton
A Specialty
All Grades
Hillsboro -:- Texas

LAMPE-THOMAS CO., Inc.
Fort Worth, Texas
Cotton Merchants
Texas, Oklahoma, Arkansas Cottons

Lucius Rash, President
I. L. Brin, Vice-President
RASH, BRIN & COMPANY
Incorporated
Cotton Merchants
Members
New York Cotton Exchange, Texas Cotton Ass'n., Dallas Cot. Ex.
Associate Members Liverpool Cotton Exchange
Terrell, Texas
Dallas, Texas

MERROWING
Established 1838
FOR
Stocking Welting
Toe Closing
Mock Seaming
Maximum Production
Minimum Cost of Upkeep
Unexcelled Quality of Work
THE MERROW MACHINE COMPANY
20 Laurel Street, Hartford, Conn.

MEMPHIS COTTON

JOSEPH NEWBURGER, President
D. W. BROOKS, Vice-President
W. H. WILLEY, Vice-President
NORMAN MONAGHAN, Secy-Treas.

NEWBURGER
COTTON CO.
(INCORPORATED)

MEMPHIS - TENN.

Mississippi Delta Cotton our Specialty

WATSON-WHITE COMPANY
(Incorporated)
Cotton
Offices:
Jackson, Tenn., Memphis, Tenn., Dyersburg, Tenn, Jonesboro, Ark.
We gin over 15,000 bales of cotton annually, and would ship from gin to mills on type.
Jackson, Tennessee

TIPTON & COMPANY
Tennessee, Arkansas and Mississippi
Cotton
Brownsville, Tenn.

L. W. MAGRUDER & CO.
Cotton
Mississippi, Tennessee and Arkansas Staples
94 South Front St.
Memphis, Tenn.

CABLE ADDRESS BIGBOY
DOMESTIC

ALABAMA, GEORGIA DELTA AND WESTERN COTTONS

BRAND BIGBOY
EXPORT

John L. Robinson & Co.

Cotton
Home Office
MEMPHIS, TENN., U. S. A.
Codes
Shepperson Codes 78, 81 and 1915
Meyers 39
BELL and POSTAL
Long Distance Phones
P. O. Box 521

Buying agencies in the best staple sections in Arkansas, Oklahoma, Texas, Mississippi, Tennessee, Alabama and Georgia. All shipments given careful attention.
Direct selling agency for North and South Carolina and Virginia.

ROBINSON & BAGGETT
Brevard Court
Charlotte, - - - - - - - N. C.

Modern Twisters

By a Representative of the Saco-Lowell Shops.

THE Ring Twister has been improved more by the use of tape drive on the spindles than any other one of the changes which have been instrumental in the development of the present day machine. Tape drive gives more even twist in plied yarn and the more uniform spindle speed permits operating at higher speed, resulting in more production.

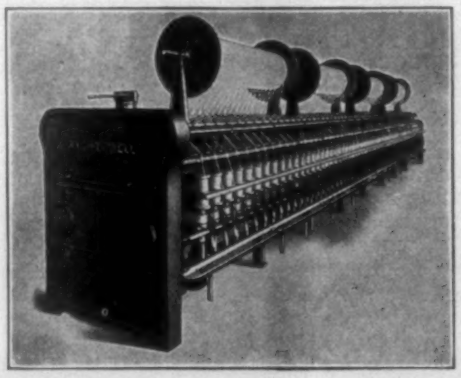
The use of metallic thread boards on both wet and dry twisters is practically standard with all mills operating twisters built during recent years. On wet twisters the metallic thread boards are nickeled, parkerized or painted with a waterproof paint. Metallic thread boards permit the proper setting of thread guides to the spindles which cannot be obtained on wooden boards with porcelain eyes.

Revolving brass rolls in water pans relieve the strain on the yarn which was one of the objections to glass rods formerly used on wet twisters.

The double traversing arrangement provided on wet twisters includes a set of guides between the creel and the water pan, as well as another set between water pan and rolls, which prevent or reduce the wearing of surface on revolving brass rolls in water pan, brass wiper rod, and brass covered top and bottom rolls. The first set of guides between creel and pan will produce some traverse on the rolls, but longer traverse on rolls can be obtained and better regulated by the second set of guides between pan and rolls.

The use of cord tires has required a great many heavy twisters which were formerly used in duck and cordage mills. To save in creeling and to give longer lengths of single yarn some of the mills have required twisters arranged with beam creels. The yarn is placed on the beam by a standard warper. The guides required for leading the yarn from the beam in the twister creel to the guides at the back of roll have been so arranged that there is practically no trouble now with these beam creels.

At one time only horizontal flanged rings were used, but now on very heavy ply at high speeds the vertical flanged ring gives better quality and outwears the horizontal flanged ring.



New developments in the building of spindles have made it possible to operate the spindles on heavy plied yarn 50 to 100 per cent faster than with the older type of spindle. This, of course, gives greater production, requires fewer twisters and does not consume any more power per twister and a great deal less power in proportion to the production obtained. This new spindle is known as the Feaster type spindle and shows considerable saving in power over all other types, including the ball-bearing spindles.

Individual motor drive, we believe, has been more satisfactory on twisters than on any other one machine directly operated from the driven unit, as there is less stopping of twisters than the other machines in the mill, all piece-ups being made by the use of the knee brakes on the spindles, and the sudden starting of the frame breaks but very few ends. The use of the individual drive overcomes the usual belt slippage which is quite frequent on heavy machines operating at full capacity and, of course, this increased production.

YOU MAY BUY

Victor ring travelers knowing that they approach perfection, are a quality product and will run on your spinning or twisting frames most efficiently and very economically.

VICTOR RING TRAVELER COMPANY
20 Mathewson St. **Providence, R. I.**
Southern Agent
A. B. CARTER
615 Third National Bank Bldg.
Gastonia, N. C.

Heavy Gain in Cotton Exports

Increased shipments of textile fibers and textiles accounted for more than 68 per cent of the $337,000.000 gain in total domestic exports during the past fiscal year, according to an analysis released today by the Textile Division of the Department of Commerce.

Sales for the 12 months ending June were valued at $1,089,859,812, an increase of $230,442,000 over the corresponding period of 1923, and represented 25.8 per cent of the total exports of all classes of domestic merchandise which aggregated $4,224,000,000.

Increased European Purchases of American Cotton.

Exports of raw cotton, including linters, during the fiscal year 1924 amounted to 5,731,936 bales, with a value of $903,975,146, an increase of 13 per cent in quantity and of 37 per cent in value compared with 1923. The latter figure, to a large extent, reflects the advance in the cost of raw cotton, the average export price per pound having been $0.306 for the 12 months ended June, 1924, as against $0.251 for the fiscal year 1923.

Europe purchased 4,979,251 bales of raw cotton, or 87 per cent of the exports during the fiscal year 1924, compared with 4,148,592 bales, or 82 per cent of the total foreign shipments in 1923. Despite short time in the British cotton industry the United Kingdom took almost 287,000 bales more of raw cotton during the fiscal year 1924 than in the previous 12 months. The past fiscal year was largely a period of inflation for the German cotton manufacturer, and German purchases of raw cotton show an increase of 403,460 bales over 1923. By June, however, the German textile industry was facing a depression as a result of German selling prices rising above world market levels. Smaller gains were registered in United States exports of cotton to France, Netherlands and Sweden, while those to Belgium, Italy, Poland, Danzig, Spain, Portugal, Austria and Czechoslovakia declined.

Foreign Sales of United States Cotton Manufactures Decline.

Foreign sales of United States cotton manufactures declined from $145,347,303 during the 12 months nded June, 1923, to $127,061,746 in the fiscal year 1924. Shipments of cotton cloth abroad declined from 541,156,027 square yards, worth $86,517,398 in 1923 to 428,461,624 square yards, with a value of $72,844,790 in 1924.

Heavy losses occurred in the quantity of cotton cloth exports to South America, which dropped from 142,527,109 square yards in 1923 to 94,039,867 in 1924, the principal decreases being credited to the following countries: Argentina, 19,195,000 square yards; Colombia, 13,432,000; Chile, 9,262,000; Peru, 3,170,000; other South America, 3,428,000.

In the fiscal year 1923 the Philippine Islands ranked first as a market for American cotton piece goods, having taken 82,064,737 square yards, but during the past fiscal year their purchases amounted to only 66,987,845 square yards. The official statistics of the Philippine Islands show that the United States supplied about 60 per cent of the cotton cloth imports during the first four months of 1924. In bleached goods and prints the United States enjoyed supremacy, while China ranked as the principal source of grey goods, and the United States and Japan share about equally in the imports of dyed goods. Chinese and Japanese sales have been made largely on the basis of lower prices, cable advices from the Philippines each month having indicated that they were underbidding the American manufacturer.

During the 12 months ended June, 1924, Cuba supplanted the Philippines as the largest buyer of American cotton cloth. Its purchases, amounting to 75,340,808 square yards, were approximately the same as in the preceding year. Shipments of cotton piece goods to Central America and Haiti showed little change from 1923 figures, while sales to Canada fell off almost 5,438,000 square yards, and those to the Dominican Republic increased about 4,069,000.

Total exports of cotton cloth, other than duck, are given below for the most important markets:

Price is undoubtedly the factor which is hindering American sales of cotton goods in foreign countries. The keenest competition has come from the United Kingdom and Japan, although continental countries, particularly Italy, have figured in the cotton cloth trade of South America.

In the Near East, Japan is making heavy inroads into the grey goods trade, in which for a time American grey cloth, especially sheetings, dominated the market. United States exports of unbleached cotton cloth to Aden declined from 12,363,000 square yards during the fiscal year 1923 to 3,852,000 in the 12 months ended June, 1924, while those to Turkey dropped from 8,245,000 square yards to 956,000 and to Rumania decreased from 4,239,000 square yards to 232,000.

United States Textile Exports Summarized.

Other textile exports during the fiscal year 1924 included the following principal commodities: Silk manufactures, $12,172,859; cordage, except jute, $7,992,228; wool manufactures, $7,728,395; artificial silk manufactures, $6,194,732; coated or waterproofed fabrics, including waterproofed clothing, $7,084,495.

Northwestern Trade Outlook Is Bullish.

St. Paul, Minn.—Business interests which center in the Twin Cities already are bullish on the outlook for heavy trade during the next six months as a result of estimates by experts that the Northwest farmers will harvest crop which will bring in $15,000,000 more than those of last year.

MISSISSIPPI STAPLE COTTON

HUMPHREY & COMPANY
Cotton
Benders and Extra Staples
Established 1894 Greenwood, Miss
Most careful personal attention to shipments of every sale to secure most perfect uniformity of staple and character.
Ask any of our mill customers as to our service.
Branch offices at every Compress point in the Yazoo Mississippi Delta.

G. D. TAYLOR & CO.
Mississippi Delta Staples
Home Office
Memphis, Tennessee

R. C. COLHOUN, JR., & CO.
Cotton
Mississippi Delta Staples a Specialty
Yazoo City, Miss.

H. Chassaniol
CHASSANIOL & CO.
High Grade Staple Cotton
Experienced Handlers of Low Grade Staples
GREENWOOD, MISSISSIPPI

B. F. OLIVER & CO
Cotton
Staples and Benders
Clarksdale, Miss.

COTTON
OKLAHOMA

(Unincorporated)
R. O. HARVEY & COMPANY
COTTON
Buyers and Exporters
Members Texas Cotton Association, New Orleans Cotton Exchange
Codes: Meyers' 39th Edition, Shepperson's 1878-1881
Wichita Falls, Texas Texas, Oklahoma and Kansas

T. J. CHAMBLESS
Cotton
All Grades Oklahoma Cotton
Member Okla. State Cotton Exchange
Ada, Oklahoma

OKLAHOMA COTTON GROWERS ASSOCIATION
A Co-operative Marketing Association for the Benefit of Its 55,000 Cotton Grower Members
Cotton Classed and Sold in Even Grades and Staple
Oklahoma City, Okla.

WELL DRILLING AND DEEP WELL PUMPS
We do the engineering, and have had 32 years experience solving water problems satisfactorily for textile mills.
Sydnor Pump & Well Co., Inc.
Richmond, Va.

W. J. BRITTON & CO.
RIVERS, BENDERS and STAPLE COTTON
105 S. Front St.
Memphis, Tenn, U. S. A.

SELLING AGENTS *for* SOUTHERN COTTON GOODS

CONVERSE & COMPANY
Frederick K. Rupprecht, President
Established in New York 1872

Selling Agents for the following Southern Mills:

Caraleigh Mills Co., Raleigh, N. C.
Neuse Mfg. Co., Neuse, N. C.
Peerless Cotton Mills, Thomaston, Ga.
Guadalupe Valley Cotton Mills, Cuero, Texas.
Virginia Cotton Mills, Swepsonville, N. C.
Postex Cotton Mills, Post, Texas.
Gonzales Cotton Mills Co., Gonzales, Texas.
Great Falls Manufacturing Co., Rockingham, N. C.
Sand Springs Cotton Mill Corp., Sand Springs, Okla.

Also for the
CONSOLIDATED TEXTILE CORPORATION
88 Worth Street New York City

Leslie, Evans & Company
61 Leonard Street New York
Selling Agents for Southern Mills
Sheetings, Print Cloth, Drills, Twills, Ducks

W. H. LANGLEY & CO.
COMMISSION MERCHANTS
57 Worth St. New York
Sole Selling Agents For
Langley Mills, Seminole Mills, Aiken Mills, Anderson Cotton Mills, Strickland Cotton Mills, Moultrie Cotton Mills, Poulan Cotton Mills, Royal Cotton Mills

TATUM, PINKHAM & GREEY
40 Leonard Street
New York
Bleached, Grey and Colored Cotton Goods

Joshua L. Baily & Co.
10 and 12 Thomas Street New York City
Philadelphia
Chicago, St. Louis, Boston, Baltimore, Atlanta, St. Paul, Dallas, St. Joseph, Cincinnati, New Orleans, Columbus, San Francisco, Seattle

Wellington, Sears & Company
93 Franklin St., Boston 66 Third St., New York
Philadelphia Chicago St. Louis Atlanta New Orleans San Francisco

Amory, Browne & Co.
Specializing in Selling Cotton Mill Products
BOSTON, 48 Franklin St. 62 Worth St., NEW YORK
Our Export Department Serves 69 Foreign Countries

CURRAN & BARRY
320 Broadway
New York, N. Y.

Cotton Goods

New York.—The drop in cotton has had the effect of easing prices on a few staple cloths. At the same time, most mills held firm and were unwilling to shade their last prices. It is considered evident that cotton is bound to fluctuate a good deal. Under these conditions, it seems difficult to formulate a definite policy, which is the cause of the irregularity.

Fundamentally, all opinions look for a very good business this fall, regardless of cotton. There is lots of buying to be done in gray cloths, although it is not possible to state now when this will materialize. There is, of course, wonder as to the extent of speculative purchases that have already taken place in gray goods, and some believe that this has been fairly large.

There was more business in finished goods last week, but the tendency is to buy only what is needed. Some buyers feel that it is sufficient to make purchases for the next 30 to 60 days. One thing that this market has done—it has eliminated ideas of looking for lower prices on finished goods, and it opened the situation to the point where it is now recognized that advances on a number of lines are a likelihood.

There was fair activity in print coths, but this quieted considerably after the cotton decline had become more pronounced.

Contracts of 64x60, 5.35 yard, sold at 9¾ cents. August-September contract, to the extent of over 10,000 pieces, reported to have have sold at five-eighths. At the close of the week, there were reports that nearby had sold in first hands at 9½ cents.

In 68x72, 4.75 yard, August-September reported sold at 10⅝ cents. Most mills were holding for at least three-quarters. At the close, 10½ had been paid for nearby. In 72x76, 4.25 yard, 12 cents was reported in first hands; 13½ cents continued unchanged for 80 squares, 4.00 yard.

The 60x48s, 6.25 yard, seemed to hold rather firm at 8¼ cents. There had been reports, late in the week, of some spots at one-eighth, but apparently these were not easy to obtain. Some 44x40, 8.20 yard, South, sold at 6¼ cents, and 48 squares, 7.15 yard, sold at 7¼ cents. Both styles are quoted higher in other centers.

Some 60x48s, 6.25 yard, for September had sold at 8¼ cents. For 27-inch, 64x60, 7.60 yard, 7 cents was again reported; 8½ for 32-inch, 64x60, 6.50 yard; 7 cents for 48x44, 7.75 yard; 6 cents for 36-inch, 9.20 yard; 5¾ for 27-inch, 9.50 yard; 6 cents for 27-inch, 9.00 yard; 8½ for 44-inch, 48 squares, 6.40 yard.

Price quotations of cotton goods in this market were as follows:

Print cloths, 28-in., 64x64s	7⅝
Print cloths, 28-in., 64x60s	7⅜
Print cloths, 27-in., 64x60s	7⅛
Gray goods, 38½-in., 64x64s	10¼
Gray goods, 39-in., 68x72s	10¾
Gray goods, 39-in., 80x80s	13½
Brown sheetings, 3-yard	15¼
Brown sheetings, 4-yard	12½
Brown sheetings, stand.	16¼
Tickings, 8-ounce	26
Denims	24½
Staple ginghams	15
Kid finished cambrics	9½a10½
Dress ginghams	18½a21
Standard prints	9¾

English Cotton Commission To Visit U. S.

Manchester, Eng., July 1.—Mr. Arno S. Pearce, the Secretary of the International Federation of Master Cotton Spinners and Manufacturers' Association, will leave Manchester this week-end on a ten-week tour of the cotton-growing areas in the United States. No other members of the Federation are going with him, but it is probable that F. Holroyd, the president of the Federation of Master Cotton Spinners' Associatons, will join Mr. Pearce at about the end of the present month. Prior to visiting the cotton fields Mr. Pearce will confer with manufacturers in New England on the state of trade and the probably consumption of cotton, and it is intended that visits will be paid to Washington, Boston, New York and Philadelphia.

Twelve months ago a delegation of five members visited the States and cabled most valuable information as to the progress of the crop, and European spinners who acted on the advice undoubtedly did very well, as the forecasts proved to be correct.

B C
TRADE MARK
WARP TYING MACHINES HAND KNOTTERS
WARP DRAWING MACHINES
AUTOMATIC SPOOLERS HIGH SPEED WARPERS
BARBER-COLMAN COMPANY
BOSTON, MASS. GREENVILLE, S.C.
MAIN OFFICE AND FACTORY:
ROCKFORD, ILL. U. S. A.

The Yarn Market

Philadelphia.—Demand for cotton yarns, both carded and combed, has fallen off rather abruptly, according to the dealers. It is believed this is only temporary. Although considerable covering of future requirements was accomplished on the recent advance in prices, it was only a drop in the bucket, taking the industry as a whole. A great volume of yarn buying remains to be done.. This softeing of cotton and cotton yarn values, it is believed, will be taken advantage of by a good many buyers to cover part of their forward needs. At all events, it is not expected that demand will again become as quiet as it was up to the middle of July.

For the present, however, yarn rates are being cut again. In fact, during the past few days they have been going down about as fast as they went up. Further reductions of a half to a cent and a half a pound were reported last week. Very few numbers have escaped this softening tendency. Profit-taking in cotton checked the buying movement which set in at the first of last week and the spinners noticed the difference almost immediately. The result has been a rather hurried reaction in spinners' asking prices. Buyers have ceased to display any anxiety about getting yarns, but some of the spinners have begun pressing yarns for sale at concessions.

In the price cutting that has ensued since the first of the week, Southern carded yarns have lost from one to two cents a pound, or equivalent to approximately one-third to one-fourth of their entire advance between July 17 and 28. Part of this reaction, of course, is attributable to reappearance on the market of local dealers' stocks which, during the period of advancing prices, were withdrawn in the hope of getting more for them at a later stage of the advance.

The promptness with which many of the spinners have changed front is reminiscent of the haste with which profits have been garnered recently in the stock market. Quite a few spinners, apparently, are much more concerned with getting some business to run on than they are with getting high enough prices to give them a profit. Start up first, then try for profits, seems to be the general idea in the South. Dealers point out that it is going to take a very substantial buying movement to warrant spinners' operations being increased to capacity and until this point is reached, yarns values may be slow to reflect such rallies as may develop in cotton.

Two-Ply Chain Warps.

2-ply 8s	43 a44	2-ply 24s	48 a49
10s	44 a45	2-ply 26s	49 a50
12s to 14s	44½a46	2-ply 30s	51 a52
2-ply 16s	45½a47	2-ply 40s	57 a60
2-ply 20s	47 a48	2-ply 50s	66 a67

Two-Ply Skeins.

8s	43 a44	40s	56 a60
10s to 12s	44 a45	40s ex.	60 a62
14s	45 a..	50s	68 a..
16s	46 a	60s	74 a75
20s	47 a48	Tinged Carpet—	
24s	48 a49	3 and 4-ply	37 a39
26s	49 a..	White Carpet—	
30s	51 a52	3 and 4-ply	41 a42½

Part Waste Insulated Yarn.

6s, 1-ply	35 a..	12s, 2-ply	41 a42
6s, 2, 3 and 4-ply	36½a37	20s, 2-ply	45½a46
40s, 1-ply and 2-ply	39 a40	26s, 2-ply	50 a..
		30s, 2-ply	51 a..

Duck Yarns.

3, 4 and 5-ply—		3,4 and 5-ply—	
8s	43 a..	16s	45 a46
10s	44 a	20s	47 a48
12s	44½a45		

Single Chain Warps.

10s	43 a..	24s	48 a..
12s	44 a..	26s	50 a..
14s	45 a	30s	51 a52
16s	46 a47	40s	59 a60
20s4	47 a48		

Single Skeins.

6s to 8s	42½a..	20s	46½a47
10s	43½a..	24s	48 a..
12s	44½a..	26s	49 a49½
14s	45 a45½	30s	50 a51
16s	46 a..		

Frame Cones.

8s	43½a..	22s	48 a..
10s	41 a..	24s	48 a..
12s	44½a..	26s	49 a49½
14s	45 a..	28s	50 a..
16s	45½a..	30s	50½a51½
18s	46 a..	30s tying in	50 a51
20s	47½a..	40s	62 a..

Combed Peeler Skeins, Etc.

2-ply 16s	55 a56	2-ply 50s	72 a..
2-ply 20s	57 a58	2-ply 60s	80 a..
2-ply 30s	60 a62	2-ply 70s	90 a..
2-ply 36s	60 a65	2-ply 80s	1 00a..
2-ply 40s	65 a67		

Combed Peeler Cones.

10s	52 a..	30s	65 a..
12s	53 a..	32s	65 a..
14s	54 a..	34s	67 a..
16s	55 a..	36s	69 a..
18s	56 a..	38s	70 a..
20s	56½a..	40s	72 a..
22s	57 a..	50s	78 a..
24s	57½a..	60s	85 a..
26s	58 a..	70s	95 a..
28s	59 a..	80s	1 05a..

Carded Peeler Thread Twist Skeins.

20s, 2-ply	52 a..	36s, 2-ply	62 a..
22s, 2-ply	53 a..	40s, 2-ply	64 a..
24s, 2-ply	55 a..	45s, 2-ply	69 a..
30s, 2-ply	58 a..	50s, 2-ply	74 a..

Carded Cones.

10s	47 a..	22s	53 a..
12s	48 a..	26s	55 a..
14s	49 a..	28s	57 a..
20s	52 a..	30s	59 a..

Five Cotton Mills Resume in Lowell, Mass.

Boston, Mass.—Following a shut-down varying from ten days to two weeks, several cotton mills in Lowell have resumed operations, as follows: Massachusetts Cotton Mills, Appleton, Tremont & Suffolk Mills and the Merrimack Manufacturing Company. These mills are resuming on the former curtailed basis, namely, three days a week for the Massachusetts and Appleton, while the Tremont & Suffolk and the Merrimack are operating four days weekly.

Paulson, Linkroum & Co., Inc.
52 Leonard Street, NEW YORK CITY, U. S. A.
COTTON YARNS
Philadelphia Providence Chicago Charlotte

CATLIN & COMPANY
NEW YORK BOSTON PHILADELPHIA CHICAGO
Commission Merchants
Cotton Cloth and Cotton Yarn
SOUTHERN OFFICE
910-11 Commercial Bank Bldg. CHARLOTTE, N. C.

Gum Trogaso Agglutinates
the fibres of the yarn—cotton, woolen or worsted whichever it may be—and prevents waste of good materials by eliminating flyings.
Gum Tragasol is Cheaper
than either wool or cotton, therefore, its use is a distinct economy.
JOHN P. MARSTON COMPANY
247 Atlantic Avenue, Boston

D. H. Mauney, Pres. Phil S. Steel, Vice-Pres. Frank W. Felsburg, 2nd V.-Pres.
J. S. P. Carpenter, Treasurer D. A. Rudisill, Secretary
Mauney-Steel Company
COTTON YARNS
DIRECT FROM SPINNERS TO CONSUMER
237 Chestnut Street. Philadelphia, Pa.
Eastern Office, 336 Grosvernor Bldg., Providence, R. I.
Southern Office: Cherryville, N. C.
MILLS DESIRING DIRECT REPRESENTATION AND HAVE THEIR PRODUCT SOLD UNDER THEIR OWN MILL NAME WILL PLEASE COMMUNICATE.

RIDLEY WATTS & Co.
COMMISSION MERCHANTS
44-46 Leonard Street NEW YORK CITY
Branch Offices
Chicago Philadelphia Boston
St. Louis Baltimore

COTTON YARNS
All Numbers, Regular, Reverse and Fancy Twists.
Mills wishing to sell direct to discriminating customers please write, stating counts and quality, carded or combed, skeins, ball or chain warps, tubes or cones.
Sales to customers by wire on mill's acceptance and approval
Edward J. McCaughey
YARN BROKER
51 Arlington St., Pawtucket, R. I.
DIRECT MILL AGENT

PAIGE, SCHOOLFIELD & CO., INC.
CARDED AND COMBED COTTON YARNS
SOLE REPRESENTATIVES
Mandeville Mills, Carrollton, Ga.
Audrey Spinning Mills, Inc., Weldon, N. C.
White Hall Yarn Mills, White Hall, Ga.
Chatham Mfg. Co. (Cotton Dept.), Elkin, N. C.
Singles and Plies—Right and Reverse Twists
Cable Cords—Ratines and Colors
1 Madison Ave., New York City
PHILADELPHIA PROVIDENCE

Want Department

For Sale

1 Keeler Horizontal Return Tubular Boiler, 90 H. P., 60" diameter, 17 feet long. To carry 100 lbs pressure. The Randolph Mills, Franklinville, N. C.

Personal

J. G. Sanders, formerly of Kent, Ohio, please communicate with G. C. Dilling, West, Texas.

Position Wanted

Ambitious married man with long experience in Southern territory bleachery, various capacities, is anxious to better his condition. Address W. L., care Southern Textile Bulletin.

Practical Spninnr

With many years' experience desires position as superintendent or overseer spinning room. Can give best references. Communicate with S. H. W., care Southern Textile Bulletin.

COMPLETE DYEHOUSE EQUIPMENT

Special Machinery for
Textile Mills
**The Klauder-Weldon Dyeing
Machine Co.
Bethayres, Pa.**

FOR SALE

Shafting At Half Price

With Hangers for Same

No.	Diam.	Length
1	2 3/16 in.	8 ft. 10 in.
1	2 .7/16 "	20 " 0 "
1	3 7/16 "	17 " 7 "
1	2 3/16 "	15 " 7 "
1	2 7/16 "	19 " 7 "
1	2 11/16 "	9 " 0 "
1	2 7/16 "	20 " 0 "
1	1 15/16 "	6 " 6 "
1	2 5/16 "	8 " 10 "
1	2 11/16 "	8 " 8 "
2	1 15/16 "	6 " 6 "
1	1 15/16 "	6 " 3 "
1	2 7/16 "	11 " 4 "
1	2 15/16 "	10 " 0 "
1	2 3/16 "	18 " 0 "
1	1 15/16 "	15 " 0 "
1	2 7/16 "	6 " 11 "
1	2 15/16 "	10 " 6 "
1	2 7/16 "	10 " 0 "
1	2 7/16 "	10 " 6 "
1	2 7/16 "	6 " 2 "
1	3 3/16 "	13 " 7 "
1	3 3/16 "	5 " 9 "
1	2 15/16 "	9 " 6 "
1	2 7/16 "	10 " 3 "
1	2 7/16 "	10 " 0 "
1	2 7/16 "	20 " 0 "
1	2 3/16 "	10 " 6 "
1	4 15/16 "	24 " 4 "

**THE RANDOLPH MILLS, Inc.
Franklinville, N. C.**

Save in freight by using

W I L T S

Veneer Packing Cases

They are lighter and stronger, made of perfect 3-ply Veneer Packing Case Shooks. A saving of 20 to 80 pounds in freight on every shipment because of extreme lightness. Stronger than inch boards, burglarproof, waterproof and clean. Write for prices and samples. Convincing prices—Quick service.

Wilts Veneer Co., Richmond, Va.

PATENTS

Trade Marks and Copyrights

Difficult and rejected cases specially solicited. No misleading inducements made to secure business. Over thirty years active practice. Experienced, personal, conscientious service. Write for terms. Address

**SIGGERS & SIGGERS
Patent Lawyers
Suite 34 N. U. Washington, D. C.**

Experienced Salesman Wanted

Well known leather belting manufacturer has opening for experienced salesman. No others need apply. Preferably one acquainted with Southern textile trade. Splendid opportunity for right man. Write, giving full particulars, to Box X. Y. Z., care Southern Textile Bulletin.

RAW STOCK DYEING

We Specialize on Fast Colors
We reclaim burnt and damaged cotton
Prompt Service

**SANDERS, SMITH & CO.
Charlotte, N. C.**

UNIVERSAL WINDING CO.

BOSTON, MASS.

Manufacturers of Textile Winding Machinery

Winding machines for single and ply yarns, cotton, woolen, worsted and silk. Write for circular describing the NEW WIND DOUBLER, also the No. 80 for winding SUPERCONES.

**CHARLOTTE OFFICE
804 Realty Building
FREDERICK JACKSON**

**FACTORY OFFICE
PROVIDENCE, R. I.**

—Agents—

Ring Traveler Specialists

U. S. Ring Traveler Co.

159 Aborn Street, PROVIDENCE, R. I.

ANTONIO SPENCER, President **AMOS M. BOWEN, Treasurer**

WM. P. VAUGHAN, Southern Representative
P. O. Box 792 **GREENVILLE, S. C.**

U. S. Ring Travelers are **uniformly tempered** which insures even-running spinning. They are also correct as to **weight** and **circles**. Quality guaranteed.

DRONSFIELD'S PATEN

"ATLAS BRAND"

EMERY FILLETING

"The New Flexible" **"Needs no 'Damping'"**

Stocks in
Boston and
the South

PLIABLE
YET
TENACIOUS

Guaranteed 'A' Quality—the Only Quality we Make

Used the wide world o'er and recognized by every race as the

Standard Card-Grinding Medium

**Supplied by Principal
Supply Houses
or**

DRONSFIELD'S
SALES AGENCY

**232 Summer Street
BOSTON, MASS.**

***LEIGH & BUTLER,
Managing Agents***

Large Use of Silk Among Cotton Mills

New Bedford, Mass.—The modern tendency to wear more silk and less cotton is regarded by most people as a very serious blow at the prosperity of the cotton manufacturing industry and is blamed by most people as one of the big factors in the depression that has ruled in the industry during the past year and a half or two years.

"Why don't the cotton mills get out and fight the silk people?" some people ask. "Why don't they defend themselves against such inroads? Get the people to wearing cotton again."

Those who are acquainted with the activities of some of the New Bedford fine goods mills know that the cotton manufacturers have not been so much asleep as some supposed. They have been "fighting the silk people" in a rather unexpected way—they have been making silk goods themselves.

Some of the New Bedford "cotton" mills have been using silk at the rate of a ton a day and more than one "cotton" mill during the past year spent far more for silk than it did for cotton to use in its mill.

"If necessary, we could turn nearly our whole equipment over onto the manufacture of silk," said one cotton manufacturer, "and I guess we could hold our own, though it would leave much of our cotton spinning and preparatory equipment idle. But we are here to do business and we will make what the market wants to buy—if it is silk, why then, we will make silk."

Some idea of the unusually heavy volume of silk used during the past year by some of the New Bedford fine goods mills can be gained from figures quoted by one mill treasurer to some of his stockholders. He said that his mill had used more than $2,000,000 worth of silk during the year, as compared with approximately $600,000 worth the previous year. The volume, he said, ran to nearly 600,000 pounds, or fully a ton a day, allowing for Sundays and holidays.

These figures, of course, included both real silk and artificial silk, but the experience of this mill is fairly representative of what most of the other fine goods mills have been doing. Out of New Bedford's twenty mill corporations which manufacture fine cotton fabrics fifteen of them are equipped to make silk and cotton fabrics and during the past year have been using an unusually large quantity.

So heavy has been the consumption of silk at some of these big weaving mills that special reeling and winding equipment has been installed to an extent which, in localities not accustomed to such large textile establishments, would be dignified by being called a new silk mill.

The type of goods in which the silk is used from a small silk stripe running through a fabric made otherwise entirely of cotton to a silk with a cotton warp. Sometimes various kinds of silk are combined in the same fabric for the sake of the varying degrees with which they will take coloring matter. Different varieties have certain characteristics peculiar to themselves, and for that reason the sales of silk to New Bedford mills include not only the various kinds of Oriental silk from either Japan, China or India, but also include Italian silk, tussah silk and, of course, the ever-present artifical silk, or rayon, as it is now officially caled.

It is in the use of artifical silk that the great strides have come principally, though the New Bedford mills are also using a great deal more real silk than they were wont do several years ago. The consumption of artificial silk, of course, has multiplied many times over, and there are now so many different kinds and qualities of artificial silk that the use of this material is coming to be a field by itself. "It is astonishing what a tremendous improvement they have made in artificial silk during the last year or two." said one local cotton manufacturer, "'but there are all kinds still on the market.—Journal of Commerce.

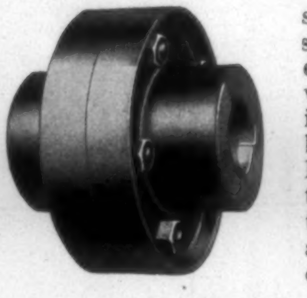
Judson's Friendly Spirit

The value of athletics as a means of cementing communities in friendly rivalry was demonstrated Saturday night when officals of the Judson mill baseball team were host to players and officals of the other clubs in the league.

About 250 persons were present. Many of these were from Judson, but each of the remainging seven villages in the Piedmont Textile League was represented. It was a gala occasion as the men who had met on the baseball diamond as rivals gathered in the twilight and enjoyed the hospitality of a friendly people.

J. R. Copeland, manager of the Judson baseball team, said the party had been arranged to bring the players and officals of the league together in a spirit of harmony and congeniality. No "politics" entered into the event as the baseball chances of no one team were discussed more than that of any other team. However, doubtless the visitors could not help from thinking that a team with the spirit which Judson has shown would be a good loser as well as a good winner, if the baseball gods decree it that way. Judson, a newcomer to the Piedmont Textile League, is now leading the other culbs in the circuit by a margin of about one and a half games.

This probably is one of the few events, if not the only one, of its kind ever held in this section. Men engaged in other lines of endeavor have net to discuss things in which all interested; but for a baseball family, embracing eight villages, to have a re-union seems to be something new. The Judson baseball management, in addition to displaying hospitality and further strengthening the good feeling existing between the different clubs, may have started something which will continue to bear fruit as the years pass.—Greenville Daily Piedmont.

PULLEYS HANGERS
The T·B· WOOD SONS CO. Line
FLANGE OR PLATE COUPLINGS

Designed to withstand severe lineshaft service. Flanged to protect the workman from being caught on the bolt heads or nuts. Machined all over to template, making them interchangeable and therefore easily duplicated.
Interchangeability is a feature that has made THE T·B· WOOD SONS CO. LINE of Power Transmissionary Machinery the standard in so many of the country's largest plants.
Catalogue on request
T. B. Wood's Sons Co.
CHAMBERSBURG, PA.
MILTON G. SMITH, Sou Sales Agent,
Greenville, S. C.
CLUTCHES
COUPLINGS
POWER TRANSMITTING MACHINERY

A Dangerous Competitor—FIRE

Fire insurance adjustments will recoup your losses, but cannot help you fulfill contracts or replace profits that you didn't make.

Over 70% of the cotton spindles of the United States and Canada are insured in the New England Factory Mutual Insurance Companies. To be able to say that your factory complies with the standards set by these companies, goes a long way in convincing your customers and your bank that you will be able to fulfill your contracts as to delivery dates.

For the purpose of furnishing better service to our present and prospective members, we have located a representative in the South. Write him today for full information.

Firemen's Mutual Insurance Company
G. H. STEUART, Southern Representative
2123 Greenway Street
Charlotte, N. C.

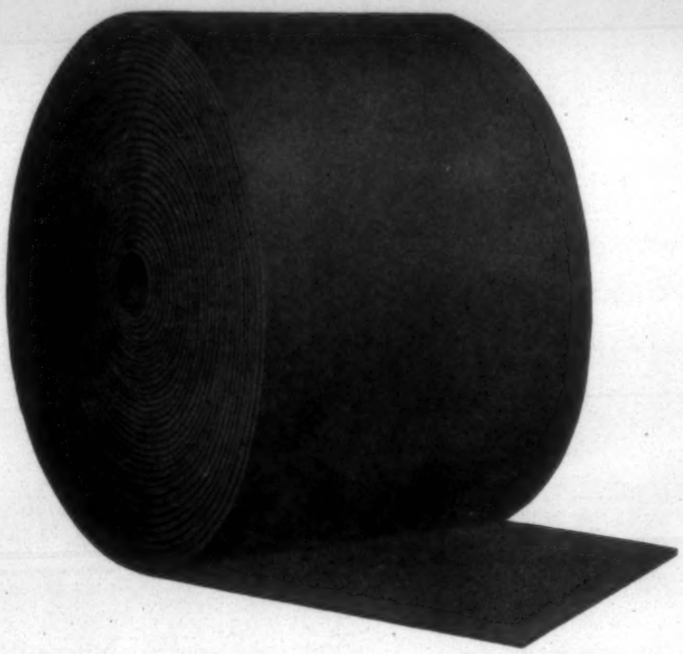
CLASSIFIED LIST OF ADVERTISERS

- AIR CONDITIONERS—
  - American Moistening Co.
  - The Bahnson Co.
  - Carrier Engineering Co.
  - Parks-Cramer Co.
- ALBONE—
  - Roessler & Haaslacher.
- ARCHITECTS & MILL ENGINEERS—
  - Lockwood, Greene & Co.
  - Sirrine & Co., J. E.
- ASH HANDLING EQUIPMENT—
  - Link-Belt Co.
- AUTOMATIC FEEDS FOR COTTON—
  - Saco-Lowell Shops.
  - Whitin Machine Works.
- AUTOMATIC STOP MOTION—
  - Eclipse Textile Devices, Inc.
- AUTOMATIC YARN CLEANER—
  - Eclipse Textile Devices, Inc.
- BALL-BEARING—
  - Fafnir Bearing Co.
  - S. K. F. Industries, Inc.
- BALERS—
  - Economy Baler Co.
  - Saco-Lowell Shows.
- BALING PRESSES—
  - Economy Baler Co.
- BANDS AND TAPE—
  - American Textile Banding Co.
- BANKS—
  - American Trust Co.
- BEAMING AND WARPING MACHINERY—
  - Draper Corporation.
  - T. C. Entwistle Co.
  - Saco-Lowell Shops.
- BEAM HEADS—
  - Mossberg Pressed Steel Corp.
- BEAMS (All Steel)—
  - Mossberg Pressed Steel Corp.
- BEAMING COMBS—
  - Steel Heddle Mfg. Co.
- BEARINGS, ROLLER—
  - Hyatt Roller Bearing Co.
- BEARINGS, SHAFT—
  - Fafnir Bearing Co.
  - Hyatt Roller Bearing Co.
  - William Sellers & Co., Inc.
  - Wood's, T. B. & Sons Co.
- BEARINGS, TEXTILE MACHINERY—
  - Fafnir Bearing Co.
  - Hyatt Roller Bearing Co.
- BELT CONVEYORS—
  - Link-Belt Co.
- BELT TIGHTENERS—
  - Link-Belt Co.
  - Wood's, T. B. & Sons Co.
- BELTING—
  - Charlotte Leather Belting Co.
  - Chicago Belting Co.
  - Druid Oak Belting Co.
  - Grant Leather Corp.
  - Graton & Knight Mfg. Co.
  - E. F. Houghton & Co.
  - Edward R. Ladew Co.
  - I. B. Williams & Sons.
- BELT, CEMENT—
  - Chicago Belting Co.
  - E. F. Houghton & Co.
  - Edward R. Ladew Co.
  - Graton & Knight Mfg. Co.
  - I. B. Williams & Sons.
- BELT LACING—
  - Chicago Belting Co.
  - Edward R. Ladew Co.
  - E. F. Houghton & Co.
  - Graton & Knight Mfg. Co.
- BELTING, LINK—
  - Link-Belt Co.
- BENCH DRAWERS, STEEL—
  - Lupton's, David, Sons Co.
- BENCH LEGS, PRESSED STEEL—
  - Lupton's, David, Sons Co.
- BICARBONATE OF SODA—
  - Mathieson Alkali Works, Inc.
- BLEACHERIES—
  - Sayles Finishing Plants, Inc.
- BLEACHING MATERIALS—
  - Arabol Mfg. Co.
  - Arnold, Hoffman & Co., Inc.
  - Atlantic Dyestuff Co.
  - Borne, Scrymser Co.
  - Bosson & Lane.
  - J. B. Ford Co.
  - National Aniline & Chemical Co.
  - Roessler & Hasslacher Chem. Co.
  - L. Sonneborn Sons, Inc.
  - United Chemical Products Co.
  - Wolf, Jacques & Co.
- BOBBIN HOLDERS—
  - Fournier & Lemoine.
- BOBBINS AND SPOOLS—
  - Courtney, The Dana S., Co.
  - David Brown Co.
  - Jordan Mfg. Co.
  - Lestershire Spool & Mfg. Co.
  - Lowell Shuttle Co.
  - Mossberg Pressed Steel Corp.
  - Walter L. Parker Co.
  - Steel Heddle Manufacturing Co.
  - ——See also Spools & Bobbins.
- BOBBIN SAVING TREATMENT—
  - The Textilac Co.
- BOXES—
  - Wilts Veneer Co.
- BOX SHOOKS—
  - Wilts Veneer Co.
- BLOWERS AND BLOWERS SYSTEMS—
  - Carrier Engineering Corp.
  - Parks-Cramer Co.
- BOBBIN STRIPPER—
  - Terrell Machine Co.
- BRETON MINERAL OIL—
  - Borne, Scrymser Co.
- BUNCH BUILDERS—
  - Holcomb Bunch Builder Corp.
- CALENDERS—
  - H. W. Butterworth & Sons Co.
  - B. F. Perkins & Son, Inc.
- CALENDER ROLLS—
  - B. F. Perkins & Son, Inc.
- CARDS—
  - Saco-Lowell Shops
  - Whitin Machine Works.
  - Howard Bros. Mfg. Co.
- CARD CLOTHING—
  - Ashworth Bros.
- CARD GRINDING MACHINERY—
  - Dronsfield Bros.
  - T. C. Entwistle Co.
  - Roy & Son Co., B. S.
  - Saco-Lowell Shops.
  - Whitin Machine Works.
- CARRIER APRONS—
  - Link-Belt Co.
- CAUSTIC SODA—
  - Arnold, Hoffman & Co., Inc.
  - Mathieson Alkali Works, Inc.
- CHAIN BELTS AND DRIVES—
  - Link-Belt Co.
  - Morse Chain Co.
- CHEMICALS—
  - Borne, Scrymser Co.
  - J. B. Ford Co.
  - International Chemical Co.
  - Mathieson Alkali Works, Inc.
  - Seydel-Thomas Co.
  - L. Sonneborn Sons, Inc.
- CLEANING MACHINES—
  - Carolina Specialty Co.
- CLOTH PILERS—
  - B. F. Perkins & Son, Inc.
- CLOTH PRESSES—
  - Economy Baler Co.
- CLUTCHES, FRICTION—
  - Wood's, T. B., Sons Co.
- CLUTCH SPINDLES—
  - Fournier & Lemoine.
- COAL—
  - Sugar Creek Coal Sales Co.
- COAL HANDLING MACHINERY—
  - Link-Belt Co.
- COMBS—
  - Steel Heddle Mfg. Co.
- COMBS (Beamers, Warpers, Slashers)—
  - T. C. Entwistle Co.
- COMBERS—
  - John Hetherington & Sons, Ltd.
- COMMISSION MERCHANTS—
  - Catlin & Co.
  - J. H. Lane & Co.
  - Mauney-Steel Co.
  - Paulson-Linkroum & Co.
  - Ridley, Watts & Co.
  - The Farish Co.
- COMPRESSORS (AIR)—
  - Allis-Chalmers Mfg. Co.
- CONDENSERS—
  - Allis-Chalmers Mfg. Co.
- CONDITIONING MACHINES—
  - American Moistening Co.
- CONDUIT FITTINGS—
  - Chicago Fuse Mfg. Co.
- CONES, PAPER—
  - Sonoco Products Co.
- CONE VISE COUPLINGS -
  - William Sellers & Co., Inc.
- CONVEYING SYSTEMS—
  - Link-Belt Co.
- COOLERS (AIR)—
  - ——See Humidifying Apparatus.
- COTTON—
  - Jackson, Hill & Co.
  - Lesser-Goldman Cotton Co.
  - Lineberger Bros.
  - Rose Bros.
  - Sanders, Orr & Co.
  - Stewart Bros. Cotton Co.
  - Tanner & Jones.
  - Wm. & York Wilson.
  - H. H. Wolfe & Co.
- COTTON MACHINERY—
  - Ashworth Bros.
  - Atherton Pin Grid Bar Co.
  - Barber-Colman Co.
  - Carolina Specialty Co.
  - Crompton & Knowles Loom Works.
  - Dixon Lubricating Saddle Co.
  - Draper Corp.
  - Fales & Jenks Machine Co.
  - H. & B. American Machine, Inc.
  - T. C. Entwistle Co.
  - Hopedale Mfg. Co.
  - Metallic Drawing Roll Co.
  - National Ring Traveler Co.
  - Roy & Son, B. S.
  - Saco-Lowell Shops.
  - Stafford Co., The.
  - Universal Winding Co.
  - Whitin Machine Works.
  - Whitinsville Spinning Ring Co.
  - Tolhurst Machine Works.
  - Terrell Machine Co.
- COTTON MERCHANTS—
  - F. M. Crump & Co., Inc.
- COTTON OPENERS AND LAPPERS—
  - Carolina Specialty Co.
  - Saco-Lowell Shops.
  - Whitin Machine Works.
- COTTON SOFTENERS—
  - Arabol Mfg. Co.
  - Arnold, Hoffman & Co., Inc.
  - Borne, Scrymser Co.
  - Bosson & Lane.
  - E. F. Houghton & Co.
  - L. Sonneborn Sons, Inc.
  - Seydel-Thomas Co.
  - Wolf, Jacques & Co.
- COTTON WASTE MACHINERY—
  - Saco-Lowell Shops.
  - Whitin Machine Works.
- COUNTERS (Revolution, Hank, Pick, etc.)—
  - The Root Co.
- COUPLINGS, SHAFT—
  - William Sellers & Co., Inc.
  - Wood's, T. B., Sons Co.
- CRANES—
  - Link-Belt Co.
- DESKS, STEEL FACTORY—
  - Lupton's, David, Sons Co.
- DISINFECTANTS—
  - Carolina Specialty Co.
  - L. Sonneborn Sons, Inc.
- DOBBY CHAIN—
  - Crompton & Knowles Loom Works.
  - Rice Dobby Chain Co.
- DOFFING BOXES—
  - Rogers Fibre Co.
- DOUBLERS—
  - Saco-Lowell Shops.
  - Universal Winding Co.
- DOORS, STEEL—
  - Lupton's, David. Sons Co.
- DRAWING ROLLS—
  - Metallic Drawing Roll Co.
- DRINKING FOUNTAINS—
  - Puro Sanitary Drinking Fountain Co.
- DRIVES, SILENT CHAIN—
  - Link-Belt Co.
  - Morse Chain Co.
- DROP WIRES—
  - Crompton & Knowles Loom Works.
  - Greist Mfg. Co.
  - Hopedale Mfg. Co.
  - Mossberg Pressed Steel Corp.
  - R. I. Warp Stop Equipment Co.
- DRYERS, CENTRIFUGAL—
  - Roy & Son Co., B. S.
  - Tolhurst Machine Works.
- DYEING, DRYING, BLEACHING AND FINISHING MACHINERY—
  - H. W. Butterworth & Sons Co.
  - Franklin Process Co.
  - Klauder-Weldon Dye Machinery Co.
  - Perkins, B. F., & Sons, Inc.
- DYESTUFFS AND CHEMICALS—
  - Atlantic Dyestuff Co.
  - Borne, Scrymser Co.
  - Bosson & Lane.
  - E. I. du Pont de Nemours & Co., Inc.
  - Metz, H. A., & Co.
  - National Aniline & Chemical Co.
  - Roessler & Hasslacher Chemical Co.
  - L. Sonneborn Sons, Inc.
  - United Chemical Products Co.
  - Wolf, Jacques & Co.
- DYE WORKS—
  - Sayles Finishing Plants, Inc.
- ECLIPSE VAN NESS DYEING MACHINE—
  - Eclipse Textile Devices, Inc.
- ELECTRICAL CONTRACTORS—
  - Huntington & Guerry.
- ELECTRIC FANS—
  - Allis-Chalmers Mfg. Co.
  - General Electric Co.
  - Westinghouse Electric & Mfg. Co.
- ELECTRIC HOISTS—
  - Allis-Chalmers Mfg. Co.
  - Link-Belt Co.
- ELECTRIC LIGHTING—
  - Allis-Chalmers Mfg. Co.
  - Cooper-Hewitt Electric Co.
  - General Electric Co.
  - Huntington & Guerry.
  - Westinghouse Electric & Mfg. Co.
- ELECTRIC MOTORS—
  - Allis-Chalmers Mfg. Co.
  - General Electric Co.
  - Westinghouse Electric & Mfg. Co.
- ELECTRIC SUPPLIES—
  - Chicago Fuse Mfg. Co.
  - Cooper-Hewitt Electric Co.
  - General Electric Co.
  - Westinghouse Electric & Mfg. Co.
- ELEVATORS—
  - Link-Belt Co.
- ENGINEERS, MILL—
  - ——See Architects and Mill Engineers
- ENGINEERS (VENTILATING)—
  - Bahnson Co.
  - Parks-Cramer Co.
- ENGINES (STEAM, OIL, GAS, PUMPING)—
  - Allis-Chalmers Mfg. Co.
  - Sydnor Pump & Well Co.
  - ——See also Ventilating Apparatus.
- EXPERT TEXTILE MECHANIC—
  - J. D. Hollingsworth.
- EXTRACTORS—
  - American Laundry Machinery Co.
  - Tolhurst Machine Works.
- FENCES—
  - Anchor Post Iron Co.
  - Cyclone Fence Co.
  - Page Fence and Wire Products Assn.
- FENCES (Iron and Wire)—
  - Anchor Post Iron Works.
  - Cyclone Fence Co.
  - Page Fence and Wire Products Assn.
- FINISHERS—
  - Sayles Finishing Plants, Inc.
- FINISHING COMPOUNDS—
  - Arnold, Hoffman & Co., Inc.
  - Borne, Scrymser Co.
  - Seydel-Thomas Co.
- FINISHING MACHINERY—
  - B. F. Perkins & Son, Inc.
- FINISHING MACHINERY—
  - ——See Dyeing, Drying, Bleaching and Finishing.
- FIRE INSURANCE—
  - Fireman's Mutual Insurance Co.
- FLAT WALL PAINT—
  - E. I. du Pont de Nemours & Co., Inc.
- FLOOR STANDS—
  - Wood's, T. B., Sons Co.
- FLUTED ROLLS—
  - Whitin Machine Works
- FLYER PRESSERS AND OVERHAULERS—
  - Southern Spindle & Flyer Co.
  - Whitin Machine Works.
- FLYERS—
  - Whitin Machine Works.
  - Southern Spindle & Flyer Co.
- FRAMES—
  - Steel Heddle Mfg. Co.
- FRICTION CLUTCHES—
  - Wood's, T B., Sons Co.
  - ——See Clutches.
- FUSES—
  - Chicago Fuse Mfg. Co.
- GATES—
  - Anchor Post Iron Works.
- GEARING, SILENT FLEXIBLE—
  - Link-Belt Co.
- GEARS—
  - Dan Gear Co.
- GRATE BARS—
  - Thomas Grate Bar Co.
- GRAB BUCKETS—
  - Link-Belt Co.
- GREASES—
  - Masury-Young Co.
  - N. Y. & N. J. Lubricant Co.
  - L. Sonneborn Sons, Inc.
- GRINDING AND POLISHING MACHINES—
  - Roy, B. S., & Son Co.
- HANGERS (Ball and Socket)—
  - William Sellers & Co., Inc.
- HANGERS, SHAFT—
  - Fafnir Bearing Co.
  - Hyatt Roller Bearing Co.
  - William Sellers & Co., Inc.
  - Wood's, T. B., Sons Co.
- HARDWARE SUPPLIES—
  - Textile Mill Supply Co.
- HARNESS TWINE—
  - Garland Mfg. Co.
- HARNESS AND FRAMES—
  - ——See Heddles and Frames.
- HEDDLES AND FRAMES—
  - Garland Mfg. Co.
  - Steel Heddle Mfg. Co.
  - L. S. Watson Mfg. Co.
- HOPPER-FEED HAND STOKERS—
  - The J H. Williams Co.
- HUMIDIFYING AND AIR CONDITIONING APPARATUS—
  - American Moistening Co.
  - The Bahnson Co.
  - Carrier Engineering Corp.
  - Parks-Cramer Co.
- HUMIDITY CONTROLLER—
  - American Moistening Co.
  - The Bahnson Co.
  - Carrier Engineering Corp.
  - Parks-Cramer Co.
- HYDRO-EXTRACTORS—
  - Tolhurst Machine Co.
- INDIGO DYEING MACHINERY—
  - H. W. Butterworth & Sons Co.
- KNITTING MACHINERY—
  - Hepworth, John W., & Co.
- KNITTING NEEDLES & SUPPLIES—
  - Williams, Chauncey A.
- KNIT GOODS, FINISHING MACHINES—
  - Kaumagraph Co.
  - Merrow Machine Co., The.
- KNOTTERS—
  - Barber-Colman Co.
  - Mill Devices Co.
- LAUNDRY MACHINERY—
  - American Laundry Machinery Co.
  - Tolhurst Machine Works.
- LANDSCAPE ARCHITECT—
  - E. S. Draper.
- LEATHER PACKINGS—
  - Chicago Belting Co.
  - Edward R. Ladew Co.
  - E. F. Houghton & Co.
  - Graton & Knight Mfg. Co.
- LEATHER LOOM PICKERS—
  - E. H. Jacobs Mfg. Co.
- LEATHER STRAPPING—
  - Edward R. Ladew Co.
  - Graton & Knight Mfg. Co.
- LIQUID CHLORINE—
  - Arnold, Hoffman & Co., Inc.
  - Mathieson Alkali Works, Inc.
- LOOMS—
  - Crompton & Knowles Loom Works.
  - Draper Corp.
  - Hopedale Mfg. Co.
  - Saco-Lowell Shops.
  - Stafford Co., The.
- LOOM BEAMS AND HEADS—
  - Mossberg Pressed Steel Corp.

CLASSIFIED LIST OF ADVERTISERS

- LOOM DROP WIRES—
  - Crompton & Knowles Loom Works.
  - Greist Mfg Co.
  - Hopedale Mfg. Co.
  - Mossberg Pressed Steel Corp.
  - Steel Heddle Mfg. Co.
  - R. I. Warp Stop Equipment Co.
- LOOM HARNESS—
  - Atlanta Harness and Reed Mfg. Co.
  - Garland Mfg. Co.
  - Palmetto Loom Harness and Reed Works.
  - Steel Heddle Mfg. Co.
- LOOM PICKERS—
  - Edward R. Ladew Co.
  - Garland Mfg. Co.
  - Graton & Knight Mfg. Co.
- LOOM REEDS—
  - Atlanta Harness and Reed Mfg. Co.
  - Palmetto Loom Harness and Reed Works.
  - Steel Heddle Mfg. Co.
- LOOM SUPPLIES—
  - E. H. Jacobs Mfg. Co.
- LUBRICANTS—
  - Borne, Scrymser & Co.
  - N. Y. & N. J. Lubricant Co.
  - L. Sonneborn Sons, Inc.
- LUG STRAPS—
  - E. H. Jacobs Mfg. Co.
- MACHINERY ENAMEL—
  - E. I. du Pont de Nemours & Co., Inc.
- MANGLES—
  - American Laundry Machinery Co.
  - H. W. Butterworth & Sons Co.
- MARKERS—
  - Kaumagraph Co.
  - Merrow Machine Co.
- MERCERIZING MACHINERY—
  - H. W. Butterworth & Sons Co.
- METAL PAINT—
  - E. I. du Pont de Nemours & Co., Inc.
  - Wadsworth, Howland & Co., Inc.
- METALLIC ROLLS—
  - Metallic Drawing Roll Co.
- METERS—
  - Allis-Chalmers Mfg. Co.
  - General Electric Co.
  - Westinghouse Electric & Mfg. Co.
- MILL ARCHITECTS—
  - ——See Architects.
- MILL CONSTRUCTION—
  - David Lupton's Sons, Inc.
- MILL LIGHTING—
  - ——See Electric Lighting.
- MILL STARCHES—
  - Arnold, Hoffman & Co., Inc.
  - Corn Products Refining Co.
  - Penick & Ford, Ltd.
  - Keever Starch Co.
  - Stein, Hall & Co.
- MILL SUPPLIES—
  - Dixon Lubricating Saddle Co.
  - Garland Mfg. Co.
  - Textile Mill Supply Co.
  - Thomas Grate Bar Co.
- MILL WHITE—
  - E. I. du Pont de Nemours & Co., Inc.
  - L. Sonneborn Sons, Inc.
  - Oliver Johnson & Co.
  - Wadsworth, Howland & Co., Inc.
- MOTORS—
  - Allis-Chalmers Mfg. Co.
  - General Electric Co.
  - Westinghouse Electric & Mfg. Co.
- OILS—
  - Arnold, Hoffman & Co., Inc.
  - Borne, Scrymser & Co.
  - E. F Houghton & Co.
  - N. Y. & N. J. Lubricant Co.
  - Klipstein, A., & Co.
  - U. S. Oil Co.
  - Wadsworth, Howland & Co.
  - Wolf, Jacques & Co.
- ONE-PIECE FURNACE LININGS—
  - The Cornish Co.
- OPENING MACHINERY—
  - Carolina Specialty Co.
  - Saco-Lowell Shops.
- OVERSEAMING AND OVEREDGING MACHINES—
  - Merrow Machine Co.
- OVERHAULERS—
  - Southern Spindle & Flyer Co.
- PAINTS—
  - Carolina Specialty Co.
  - E. I. du Pont de Nemours & Co., Inc.
  - L. Sonneborn Sons, Inc.
  - Oliver Johnson & Co.
  - Tripod Paint Co.
  - Wadsworth, Howland & Co.
- PARTITIONS, STEEL—
  - Lupton's, David, Sons Co.
- PATENTS—
  - Siggers & Siggers.
- PERBORATE OF SODA—
  - Roessler & Hasslacher Chemical Co.
- PICKERS, LEATHER—
  - Edward R. Ladew Co.
  - Garland Mfg. Co.
  - Graton & Knight Mfg. Co.
- PICKER STICKS—
  - Garland Mfg. Co.
- PIPE AND FITTINGS—
  - Parks-Cramer Co.
- PORTABLE ELEVATORS—
  - Link-Belt Co.
- POWER TRANSMISSION MACHINERY—
  - Allis-Chalmers Mfg. Co.
  - Hyatt Roller Bearing Co.
  - Fafnir Bearing Co.
  - Link-Belt Co.
  - Morse Chain Co.
  - William Sellers & Co., Inc.
  - Wood's, T. B., Sons Co.
- PREPARATORY MACHINERY (COTTON)—
  - Saco-Lowell Shops.
  - Whitin Machine Works.
- PICKERS AND LAPPERS—
  - Whitin Machine Works.
- PRESSES—
  - Economy Baler Co.
  - Saco-Lowell Shops.
- PULLEYS, CAST IRON—
  - William Sellers & Co., Inc.
  - Wood's, T. B., Sons Co
- PUMPS—(Boiler Feed also Centrifugal)—
  - Allis-Chalmers Mfg. Co.
  - Sydnor Pump & Well Co.
- PEROXIDE OF SODIUM—
  - Roessler & Hasslacher.
- PRESSES—
  - American Laundry Machinery Co.
  - Collins Bros.
- QUILLERS—
  - Crompton & Knowles Loom Works.
  - Universal Winding Co.
  - Whitin Machine Works.
- QUILL CLEANERS—
  - Terrell Machine Co.
- RAILINGS (Iron)—
  - Anchor Post Iron Works
- READY BUILT HOMES—
  - The Minter Homes Co.
- RECEPTACLES—
  - Economy Baler Co.
  - Diamond State Fibre Co.
  - Rogers Fibre Co.
- RING SPINNING FRAMES—
  - Whitin Machine Works.
  - Saco-Lowell Shops.
- RING TRAVELERS—
  - Dary Ring Traveler Co.
  - National Ring Traveler Co.
  - Victor Ring Traveler Co.
  - U S. Ring Traveler Co.
- ROLLS—
  - The Whitin Machine Works.
  - Metallic Drawing Roll Co.
  - Saco-Lowell Shops.
  - Southern Spindle & Flyer Co.
- ROLLER BEARINGS—
  - Fafnir Bearing Co.
  - Hyatt Roller Bearing Co.
- ROLLER CLOTH—
  - Best, Edward H. & Co.
- ROOFING—
  - Lupton's, David, Sons, Inc.
- ROVING CANS AND BOXES—
  - Rogers Fibre Co.
- ROVING MACHINERY—
  - Whitin Machine Works.
  - Saco-Lowell Shops.
- SADDLES—
  - Dixon Lubricating Saddle Co.
- SANITARY EQUIPMENT—
  - Vogel Co., Joseph A.
- SANITARY FOUNTAINS—
  - ——See Drinking Fountains.
- SASH, STEEL—
  - Lupton's, David, Sons Co.
- SCALLOP MACHINES—
  - Merrow Machine Co.
- SCOURING POWDERS—
  - Bosson & Lane.
  - Nichols Mfg. Co
- SESQUICARBONATE OF SODA—
  - Mathieson Alkali Works, Inc.
- SECTION BEAM HEADS—
  - Mossberg Pressed Steel Corp.
- SELLING AGENTS (COTTON GOODS)—
  - Amory, Browne & Co.
  - Converse & Co.
  - Curran & Barry.
  - Joshua L. Baily & Co.
  - W. H. Langley & Co.
  - Leslie, Evans & Co.
  - Tatum, Pinkham & Greey
  - Wellington, Sears & Co.
- SEWING MACHINES—
  - Merrow Machine Co.
- SHAFTING, HANGERS, ETC.—
  - ——See Power Transmission Machinery.
- SHAFTING—
  - Fafnir Bearing Co.
  - William Sellers & Co., Inc.
  - Wood's, T. B., Sons Co.
- SHELL STITCH MACHINES—
  - Merrow Machine Co.
  - B. F. Perkins & Son, Inc.
- SHEET METAL WORK—
  - J. N. McCausland & Co
- SHELVING STEEL—
  - Lupton's, David, Sons Co.
- SHUTTLES—
  - David Brown Co.
  - Lowell Shuttle Co.
  - Draper Corp.
  - Hopedale Mfg. Co.
  - Shambow Shuttle Co.
  - L. S. Watson Mfg. Co.
  - The J. H. Williams Co.
- SILENT CHAIN DRIVE—
  - Link-Belt Co.
  - Morse Chain Co.
- SINGEING MACHINERY—
  - H. W. Butterworth & Sons Co.
- SIZING STARCHES, GUMS—
  - Arnold, Hoffman & Co., Inc
  - Atlantic Dyestuff Co.
  - Arabol Mfg. Co.
  - L. Sonneborn Sons, Inc.
  - Stein, Hall & Co.
- SIZING COMPOUNDS—
  - Arnold, Hoffman & Co., Inc.
  - Borne, Scrymser Co.
  - Bosson & Lane.

SLIP-NOT LEATHER BELTING



Slip-Not Leather Belting is most satisfactory Belting ever manufactured for textile industry.

Convince yourself of its superiority by mailing us trial order at once.

SLIP-NOT
W. P.
IS WATER-PPOOF

Manufactured By

Grant Leather Corporation
KINGSPORT, TENN.

CLASSIFIED LIST OF ADVERTISERS

A. E. Staley Mfg. Co.
Corn Products Refining Co.
Drake Corp.
Hawley's Laboratories.
Seydel-Thomas Co.
United Chemical Products Co
John P. Marston Co.
H. A. Metz & Co., Inc.
Seydel Chemical Co.
Seydel-Thomas Co.
Wolf, Jacques & Co.
SKYLIGHT, ROLLED STEEL—
Lupton's, David, Sons Co.
SLASHER COMBS—
Steel Heddle Mfg. Co.
SOFTENERS (COTTON)—
Arnold, Hoffman & Co., Inc.
United Chemical Products Corp.
Arabol Mfg. Co.
Bosson & Lane.
Wolf, Jacques & Co.
Metz, H. A., & Co., Inc.
L. Sonneborn Sons, Inc.
Seydel Chemical Co., The.
U. S. Bobbin & Shuttle Co.
SOFTENERS—
Arnold, Hoffman & Co., Inc.
Borne, Scrymser Co.
L. Sonneborn Sons, Inc.
Seydel-Thomas Co.
SKEWERS—
U. S. Bobbin & Shuttle Co.
Courtney, The Dana S., Co.
Jordan Mfg. Co.
Walter L. Parker Co.
David Brown Co.
SLASHERS AND EQUIPMENT—
Saco-Lowell Shops.
SOAPS—
Arabol Mfg. Co.
Arnold, Hoffman & Co., Inc.
Klipstein, A., & Co.
L. Sonneborn Sons, Inc.
United Chemical Products Co.
SODA ASH—
J. B. Ford Co.
Mathieson Alkali Works, Inc.
SOFTENERS (Oil)—
Bosson & Lane.
E. F. Houghton & Co.
SOLUZONE—
Roessler & Hasslacher Chemical Co.
SPINDLES—
Draper Corp.
Saco-Lowell Shops.
Southern Spindle & Flyer Co.
Whitin Machine Works.
SPINNING FRAMES—
SPINDLE REPAIRERS—
Fournier & Lemoine.
Fales & Jenks Machine Co.
SPINNING FRAME SADDLES—
Dixon Lubricating Saddle Co.
SPINNING RINGS—
Draper Corp.
Pawtucket Spinning Ring Co.
Whitin Machine Works.
Whitinsville Spinning Ring Co.
SPOOLS—
David Brown Co.
U. S. Bobbin & Shuttle Co.
Courtney, The Dana S., Co.
Jordan Mfg. Co.
Lestershire Spool & Mfg. Co.
Steel Heddle Mfg. Co.
Walter L. Parker Co.
——See Bobbins, Spools, Shuttles.
SPROCKETS, SILENT CHAIN—
Link-Belt Co.
SPOOLERS—
Draper Corp.
Saco-Lowell Shops.
Whitin Machine Works.
SPINNING TAPES—
American Textile Banding Co.
Barber Mfg. Co.
STARCH—
Arnold, Hoffman & Co., Inc.
Corn Products Refining Co.
Keever Starch Co.
Penick & Ford, Ltd.
Stein, Hall & Co.
STOCKS AND BONDS—
American Trust Co.
STRIPPER CARDS—
L. S. Watson Mfg. Co.
SWITCH BOXES—
Chicago Fuse Mfg. Co.
TEXTILE MACHINERY SPECIALTIES—
Cocker Machine and Foundry Co.
Hyatt Roller Bearing Co.
TEXTILE SODA—
J. B. Ford Co.
TEMPLES—
Draper Corp.
Hopedale Mfg. Co.
TESTING APPARATUS (Fabrics)—
B. F. Perkins & Son, Inc.
Henry L. Scott & Co.
TRANSFER STAMPS—
Kaumagraph Co.
TRANSMISSION BELTS—
Charlotte Leather Belting Co.
Chicago Belting Co.
Grant Leather Co.
Edward R. Ladew Co.
E. F. Houghton & Co.
Graton & Knight Mfg. Co.
TRANSMISSION MACHINERY—
Allis-Chalmers Mfg. Co.
Tolhurst Machine Works.
William Sellers & Co., Inc.
Wood's, T. B., Sons Co.
TOILETS—
Vogel, Jos. A., Co.
TOOL CABINETS AND STANDS, STEEL)—
Lupton's, David, Sons Co.
TRANSMISSION MACHINERY—
Hyatt Roller Bearing Co.
TRANSMISSION SILENT CHAIN—
Link-Belt Co.
Morse Chain Co.
TRUCKS (Mill)—
Diamond State Fibre Co.
Rogers Fibre Co.
TUBES, PAPER—
Sonoco Products Co.
TURBINES (STEAM)—
Allis-Chalmers Mfg. Co.
TWISTING MACHINERY—
Draper Corp.
Saco-Lowell Shops.
Whitin Machine Works.
TWISTING TAPES—
Barber Mfg. Co.
UNDERWEAR MACHINES—
Merrow Machine Co.
VENTILATING APPARATUS—
American Moistening Co.
Parks-Cramer Co.
VENTILATING FANS—
B. F. Perkins & Son, Inc.
WARPERS—
Cocker Machine & Foundry Co.
Crompton & Knowles Loom Works.
Draper Corp.
T. C. Entwistle Co.
WARP DRESSING—
Arnold, Hoffman & Co., Inc.
Bosson & Lane.
Drake Corp.
L. Sonneborn Sons, Inc.
Seydel-Thomas Co.
Wadsworth, Howland & Co., Inc.
WARP STOP MOTION—
Draper Corp.
Hopedale Mfg. Co.
R. I. Warp Stop Equipment Co.
WARP TYING MACHINERY—
Barber-Colman Co.
WASHERS (FIBRE)—
Rogers Fibre Co.
WASTE BINS, STEEL—
Lupton's, David, Sons Co.
WASTE RECLAIMING MACHINERY—
Saco-Lowell Shops.
Whitin Machine Works.
WASTE PRESSES—
Economy Baler Co.
WATER INTAKE SCREENS—
Link-Belt Co.
WEIGHTING COMPOUNDS—
Arabol Mfg. Co.
Atlantic Dyestuff Co.
Bosson & Lane.
Marston, John P.
Metz, H. A.
Jacques, Wolf & Co.
Seydel-Thomas Co.
WATER WHEELS—
Allis-Chalmers Mfg. Co.
WELL DRILLING—
Sydnor Pump & Well Co
WHIZZERS—
Tolhurst Machine Works.
WINDERS—
Saco-Lowell Shops.
Universal Winding Co.
WINDOWS—
Lupton's, David, Sons, Inc.
Carrier Engineering Corp.
Parks-Cramer Co.
Tolhurst Machine Works.
WINDOW GUARDS—
Cyclone Fence Co.
WINDOW FRAMES AND SASH, STEEL—
Lupton's, David, Sons Co.
WIRE PARTITIONS—
Cyclone Fence Co.
YARNS—
Paulson, Linkroum & Co.
Mauney-Steele Co
YARN TENSION DEVICE—
Eclipse Textile Devices, Inc.
YARN PRESSES—
Economy Baler Co.
YARN TESTING MACHINES—
H. L. Scott & Co.

Cocker Machine and Foundry Company
Gastonia, N. C.
BUILDERS OF TEXTILE MACHINERY
Linking Warpers, Linkers, Balling Warpers, Balling Attachments, Section Beam Warpers, Long Chain Beamers, Short Chain Beamers, Warp Splitting Machines, Warp Dyeing Machines, Warp Doublers and Splitters, Warp Coilers, Boiling Out Boxes and Warp Washing Machines, Dye House Ballers.

OUR SPINNING RINGS---SINGLE OR DOUBLE FLANGE
Start Easiest, Run Smoothest, Wear Longest!
PAWTUCKET SPINNING RING CO.
CENTRAL FALLS, R. I.

NORWOOD
Mechanical Filtration
Gravity or Pressure Types
Clean, Clear Water Guaranteed
Norwood Engineering Co.
Florence, Mass., U. S. A.
Chas. M. Setzer, Sou. Rep. Charlotte, N. C.

Ashworth Brothers, Inc.
Tempered and Side Ground Card Clothing
TOPS RECLOTHED LICKERINS REWOUND COTTON MILL MACHINERY REPAIRED
For Prompt Service send your Top Flats to be reclothed and your Lickerins to be rewound to our nearest factory. We use our own special point hardened lickerin wire.
12 to 18 West Fourth St., Charlotte, N. C.
240 River Street, Greenville, S. C. 127 Central Avenue, Atlanta, Ga.

SACO-LOWELL

Card Stripper

Our Card Stripper is a combination brush and air Stripper, designed after careful experimenting to meet all requirements.

The Brush is clothed with special wire designed for the purpose and protected to prevent damage to the fillet.

The Condenser, Fan and Motor form a complete unit for each installation. The air strips the Brush, carries the waste to the Condenser, which in turn delivers to bin in clean, well opened condition.

Labor is saved by having one man strip the Card better and quicker than two men in the old way. A small band is all that is required to be carried from Card to Card.

Send for Catalog

SACO-LOWELL SHOPS
SOUTHERN OFFICE, CHARLOTTE, N. C.
Branch Office, Greenville, S. C.

Starch

EAGLE

—and these Stars have a meaning

They signify the different grades in which Thin Boiling Eagle Starch is offered to the textile industry.

Being the pioneers in the manufacture of **Thin Boiling Starches,** we are gratified at the widespread recognition they have received.

Be sure to select the grade best suited to your work. Our knowledge and experience is at your service.

CORN PRODUCTS REFINING CO.
New York
Southern Office: Greenville, S. C.

Starch

Where the Warp Threads Are Jealously Guarded---

Looms equipped with Heddles present an almost impregnable defense against the inroads of seconds. The warp threads run through the eyes of these heddles with seldom a hitch. This is due not only to the pitless surface of the heddle eyes but also to the easy flexibility of the steel wire which permits the knots to slip through. The woven fabric which comes from a equipped loom is bound to be uniformly good.

Obviously, when Heddles are on the job, time-consuming stoppages are apt to be less frequent.

Compare them point-for-point with the heddles you now use. Write for samples.

WASCO

L. S. Watson Mfg. Co.
Leicester, Mass.

UCPC

Specify "UCP" on your Requisitions

These Products are the Reliable Standards of Uniformity Demanded by the Leading Textile Mills

Dyestuffs Softeners

Sizes Oils Chemicals

UNITED CHEMICAL PRODUCTS CORPORATION

Importers, Exporters and Manufacturers

York & Colgate Sts. **Jersey City, N. J.**
Southern Office 307 Commercial National Bank Building Charlotte, N. C.
Pawtucket, R. I. **Norwalk, Conn.**
Chicago, Ill.

STAFFORD

FOR WIDE SHEETINGS

The Stafford broad loom is built to withstand severe service. Its simplicity, accessibllity of parts, and ease of operation are a few reasons why it is used by some of the most representative wide goods mills.

This loom embodies the high weaving qualities that characterize other Stafford looms, and can now be supplied with either shuttle or bobbin changing automatic features.

THE STAFFORD COMPANY
WEAVING MACHINERY
READVILLE, MASS.

CANADIAN REPRESENTATIVES
WHITEHEAD, EMMANS, LTD.
MONTREAL

SOUTHERN AGENT
FRED H. WHITE
CHARLOTTE, N. C.

PATERSON OFFICE
502 COLT BLDG.
PATERSON, N. J.

Clean Quality
Trouble Free

Quick Service
Complete Stocks

In these days of keen competition it is essential that you get **maximum production** at **minimum cost.** One of the ways to attain this end is to buy good Leather Belting for your machines. A little higher price may mean the difference between disappointment and complete satisfaction.

Charlotte Leather Belting Company
Charlotte North Carolina